

DOCTOR OF PHILOSOPHY

Measuring career anchors and investigating the role of career anchor congruence

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Award date:
2009

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Measuring Career Anchors and Investigating the Role of
Career Anchor Congruence

Catherine Ann Steele

*A thesis submitted in partial fulfilment of the
requirements for the degree of Doctor of Philosophy*

2009

Coventry University in collaboration with the
University of Worcester

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Acknowledgements

I would like to thank Dr Jan Francis-Smythe for her continued guidance and support in her role as my director of studies. Her encouragement has contributed significantly to the development of this thesis. I am also extremely grateful to my supervisory team who have all provided invaluable feedback on various sections of this research. In particular, I am grateful for the support of Professor John Arnold, my external supervisor for his approachability, thorough feedback and time.

I am also grateful for the support received from my colleagues at the University of Worcester. In particular Matthew Jellis and Catharine Ross, staff and students in the Graduate Research School, the Centre for People @ Work and Psychological Sciences.

This work could not have been completed without the support of many individuals within West Mercia Constabulary. In particular Kim White, Head of Training and Development who arranged access to staff and promoted the research within the organisation. My thanks also extends to all of the individuals who took the time to participate in this research.

Finally, a special thank you goes to my family and friends for living through this research process with me. In particular, to Nick, Mum and Dad for your unconditional support and for giving me the space to complete this thesis.

Abstract

This thesis empirically examines the career orientations inventory (COI) as a measure of career anchors and then, using this measure, it goes on to investigate the relationship between career anchor congruence and work related outcomes, specifically job satisfaction and organisational commitment.

The psychometric properties of the 40 item COI (presented by Igbaria and Baroudi, 1993) were explored by the administration of the measure to a sample of 658 individuals from 27 organisations in the UK. Through factor analysis an eight factor structure was demonstrated in line with that proposed by Schein (1993). The factor structure was replicated with a second sample. The COI demonstrated good levels of internal consistency (.59-.83) and test retest reliability (.68-.90). Similarly it was deemed to have acceptable levels of face validity and construct validity when compared to Mantech's (1983) Work Values Questionnaire (WVQ).

An analysis of the prevalence of career anchors and the demographic differences within the current sample was undertaken. This analysis provided evidence to suggest that certain career anchors may be increasing in prevalence while others are decreasing. These findings are in line with current research on the way in which workplace changes are impacting upon careers (Baruch, 2004). Evidence was found that indicated gender differences in scores on the COI subscales. Specifically women were found to score higher on the lifestyle anchor and men to score higher on the general management anchor. Differences were also found between the age groups considered in this study in the general management, creativity, pure challenge and lifestyle anchors. Interaction effects for age and gender were found for the general management and sense of service anchors.

The COI was then used to develop a commensurate measure of job career anchors. This job career anchor measure discriminated between jobs within one police organisation. The measure was then used to explore the relationship between career anchors, career anchor congruence (congruence between individual and job career anchors), job satisfaction and organisational commitment. Evidence was found to suggest that career anchors and career anchor congruence have a direct effect on job satisfaction (predicting 10% and 4% of the variance respectively). The analysis also showed support for the role of career anchor congruence as a moderator to the relationship between career anchors and job satisfaction.

This thesis makes full consideration of the academic contributions and practical implications of the research presented whilst also considering its limitations. A number of suggestions for the direction of future research have been made.

Chapter 1

Introduction

1.1 Introduction

This research proposes that career anchors are a helpful model of careers that can help individuals and organisations navigate the new career realities that exist. It provides empirical support for the use of a 40 item version of the career orientations inventory (COI) as a measure of career anchors and develops a measure that enables career anchors to be matched to job roles. This measure is used to examine the relationship between career anchor congruence and work related outcomes.

The career concept has undergone significant changes in recent years and careers have been transformed. Instead of being something undertaken by white middle class males aiming to climb the organisational ladder (Barley, 1989), careers are now seen as something which are open to all, they are individual, flexible and success is defined in many ways (Arnold, 1996). Individuals face new career realities that have both positive and negative implications. There is now increased choice and opportunity (White, 2007) and greater diversity and flexibility (Carless & Wintle, 2007) that enables individuals to choose a career to suit their needs (Savickas, 2002). However, many organisations have introduced flatter structures and therefore reduced opportunities for career progression in a hierarchical sense. The chance of a job for life within one organisation has been taken away for many leading to a change in the relationship between employers and employees (Rousseau, 2004). These relationships are increasingly short term and individually negotiated to ensure they comply with the diverse range of needs of today's workforce (Freese & Schalk, 1996). These changes have led to organisations taking an increasingly hands off approach to career management, leaving individuals with greater responsibility for their own career development (Stickland, 1996).

The prevailing approach to careers focuses on upwards progression and linear careers. To support both individuals and organisations in adapting to the changes outlined above a different theoretical approach is required. After a detailed review of the literature it is proposed that Schein's (1978) career anchor model provides a suitable framework to conceptualise these new career realities. Career anchors describe an individual's talents, motives and values and are designed to aid the

career decision making process. The model incorporates both traditional perspectives such as the desire for increased managerial status and more current perspectives by allowing for consideration of lifestyle factors to influence career decisions. The career anchor model has been in existence for 30 years and still appears in recent academic and practitioner literature (e.g. Brindle & Whapham, 2003a; Coetzee, Schreuder & Tladinyane, 2007; Danziger, Rachman-Moore & Valency, 2008; Ramakrishna & Potosky, 2003). Despite this popularity the model has faced criticism and it is these criticisms that this research seeks to address. The ultimate aim of this research is to build on the current research literature by validating a mechanism for measuring career anchors and enabling the extension of applications of the career anchor model by considering its relationship to work related outcomes.

This research was match-funded by a UK police organisation with a specific focus on the civilian staff within the organisation, known as police staff. This group of staff carry out a wide range of functions ranging from operational roles such as Community Support Officers to support functions such as human resources and finance. The studies described in the thesis that focus on congruence and the career anchor model were conducted within this organisation. To the authors knowledge only one academic paper exists that concentrates on police staff. This group of staff are increasing in numbers so the research presented here provides a unique opportunity to learn more about their career needs at the same time as extending the academic knowledge of the career anchor model.

1.2 Research Objectives

The research outlined in this thesis seeks to:

1. Explain why the career anchor model is applicable to the new career realities that exist within the world of work.
2. Provide empirical support for the measurement of career anchors using the Career Orientations Inventory (COI) in the UK.
3. Answer questions concerning the properties of the COI as a psychometric instrument.
4. Examine the prevalence of each of the career anchors in the current sample and investigate the existence of demographic differences in the career anchors held by individuals.

5. Test whether or not career anchors can be matched to job roles within a police organisation.
6. Use the matching process as the basis for an empirical investigation into the role of congruence and career anchors with a police organisation.

1.3 Thesis Structure

Chapter 1 provides a brief introduction to the thesis and outlines the main research objectives. Chapter 2 introduces the career concept by explaining the historic perspective, the reasons why this is no longer applicable and introduces the current concept of careers. It looks at the complexities of career theory and explains the reasons for the choice of career anchors as the focus of this research, thus addressing objective 1. Chapter 3 concentrates on the career anchor model. It describes the development of the model, the components of the model and the approaches to career anchor measurement. The published literature on the career anchor model is reviewed, gaps in this literature are identified and the way in which this research seeks to address these gaps are all outlined in this chapter. The specific hypotheses to be tested in this research are presented at the end of chapter 3.

Chapter 4 provides details of the methodological approaches taken to the studies outlined in this thesis. It provides background information on organisational research, psychometric theory and the measurement of congruence. This chapter leads into each of the empirical chapters as indicated in Figure 1.1.

Chapter 5 contains the first studies. In this chapter objectives 2 and 3 are examined through an empirical investigation of the COI using data collected from a large, varied sample of working adults in the UK (n=658). The factor structure is examined and reliability and validity are considered. Chapter 6 seeks to address objective 4 by examining the prevalence of each of the career anchors across this sample and testing for demographic differences, specifically concentrating on age and gender as the literature indicates these variables impact significantly upon careers.

Chapter 7 is included to provide an introduction to the police context, which forms the basis of the data collection, required for chapters 8 and 9. The factors relating to careers within this context are outlined and the implications of these factors for the

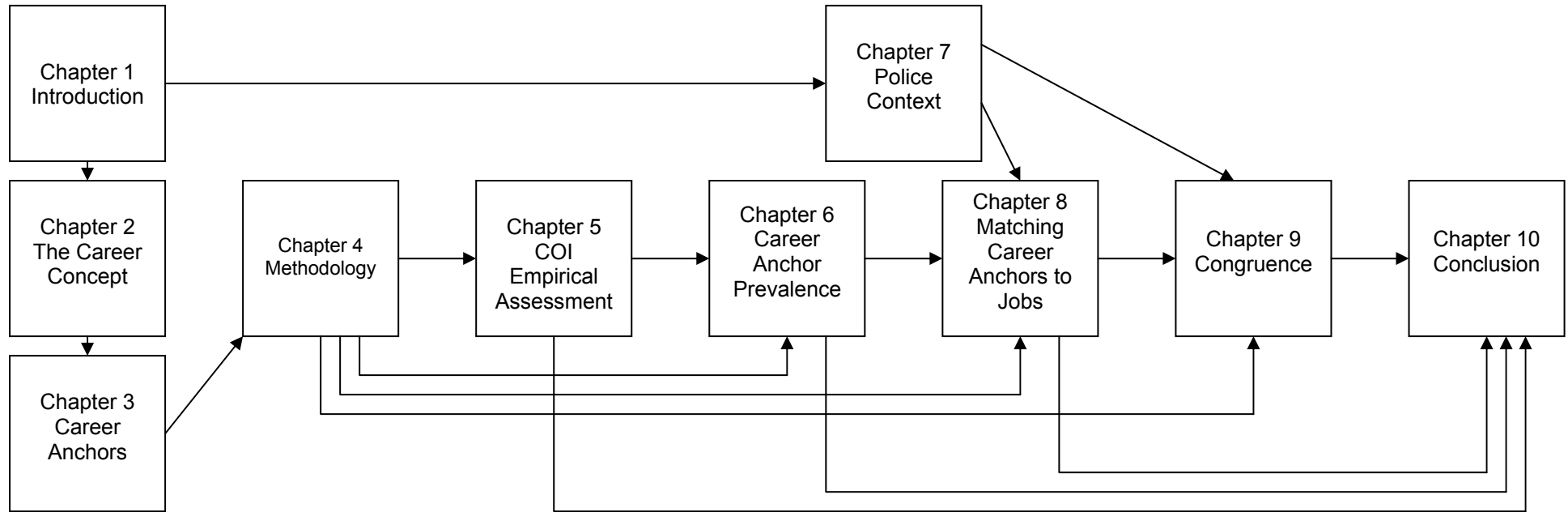
career anchor model and the implications for the studies conducted within this organisation are discussed.

Chapter 8 addresses research objective five by considering the ways in which career anchors can be matched to police staff roles. Two approaches to matching are taken; firstly using an expert panel to match anchors to 126 police staff roles from four different departments. Secondly a measure of job anchors is developed from the COI and data are gathered from job incumbents (n=157) of a more manageable nine different job roles. The findings from this chapter provide the basis for the analysis conducted in chapter 9 and address research objective 5.

Chapter 9 is the final empirical chapter of this thesis. Within the chapter the concept of congruence and its relationship to the career anchor model are examined (research objective 6). Two approaches to the measurement of congruence are taken, subjective (n=122) and objective (n=184) (Cable & Edwards, 2004). The impact of congruence on the outcome variables job satisfaction and organisational commitment are examined. Several relationships are tested within chapter 9; firstly the relationship between career anchors themselves and the outcome variables; secondly the relationship between congruence and outcomes; thirdly the role of congruence as a mediator to the relationship between career anchors and outcomes; fourthly the role of congruence as a moderator between career anchors and outcomes and finally the relationship between career salience and congruence is considered.

As indicated in Figure 1.1, chapter 10 summarises the research findings from each of the empirical chapters. It also considers the limitations of each study, discusses the contributions this research makes to the academic literature and to practitioners and finally suggests directions for future research that have arisen.

Figure 1.1 Map illustrating the structure of this thesis.



Chapter 2

**Careers: Concept, Theory and
Management**

Chapter 2: Careers; Concept, Theory and Management

2.1 The Career Concept

For recent generations the process of choosing a career has become more complex. The opportunities for career development have broadened and are changing all the time creating new career realities (Arthur, Inkson & Pringle, 1999). This chapter aims to introduce the reader to the career concept, its history, its current position, the theories that surround it and the way in which both organisations and individuals can manage it. The first section begins by taking an historic approach by considering the traditional view of careers, looking at how and why this has changed and explaining how these changes relate to the current study. Section two concentrates on career theory by introducing a variety of existing career models including the one that forms the focus of the research presented in this thesis. Section three examines the role of congruence in relation to the career concept by first considering what congruence means before exploring the various outcomes believed to be associated with it. Finally the way in which careers are managed by both individuals and organisations is considered.

2.1.1 The History of Work

The career concept has undergone dramatic changes as a result of transformations to working practices. Literature on the history of work dates back to prehistoric times (Baruch, 2004; Bradley, Erickson, Stephenson & Williams, 2000), during which there was little distinction between work and life (Grint, 2000). Work, in the form of hunting and building was required to survive. Both men and women carried out various gender divided tasks. The first transformation in working practices was the change from work being carried out mainly for survival, to a society where work was organised in a more formal system (Baruch, 2004). Around this time the variety of work available increased, Peiperl and Baruch (1997) describe three types of pre-organisational career: labourers, independents (farmers and merchants, people whose work enables them to be self sufficient), and craftsmen. Work gradually became categorised into specific trades and hierarchies were introduced meaning different jobs carried different status, with all higher status roles carried out by men (Grint, 2000). The advent of the Industrial Revolution in the late 18th and 19th century

brought about a second transformation to working lives (Ackerman, 1998). In the UK this meant a decline in numbers employed in agriculture and a rapid increase in the numbers employed in manufacturing. Prior to this, work organisations were small, often family owned and/or home based (Grint, 2000). The growth in manufacturing created a number of large factories where a large number of people worked in one place, often for one individual. Most recently, the twentieth century has brought another transformation to the work available. This time the UK has seen a move away from manufacturing towards a service based economy (Baruch, 2004). This has caused many workers to move out of traditional blue collar roles in manufacturing and production industries into white collar, office based jobs. Further decline of many traditional industries, typically farming, manufacturing and mining, was seen during the latter part of the twentieth century. Towards the end of the twentieth century a further shift from a service based to a knowledge based economy has been seen in the UK (Drucker, 1999) due to the advances in technology and communications. These technological advances have made it easier to work globally thus significantly increasing competition between countries. The work carried out now is very different to that of a century ago and the pace of change is increasing. As a result the career paths taken by workers are also very different. This is illustrative of what Baruch and Hind (1999) call perpetual change.

These historic transformations and the increased uncertainty caused by frequent change all impact heavily on the career concept. The way in which careers are enacted, their length, their breadth and their management have all been subjected to change. If a theory of careers is to be useful to individuals and organisations moving forward then this theory must be flexible and allow for change. It must also be broad enough to allow for the additional opportunities that may be created in the future. The following section considers the traditional view of careers and questions how applicable this is today.

2.1.2 Traditional views

The historic perspective on careers views them as essentially linked to hierarchical progression. Career success is conceptualised as achieving a senior management position, high status and financial security (Barley, 1989). The following definitions of career demonstrate what is referred to here as the traditional view:

“in everyday usage ‘career’ is typically used to denote incremental development, the **steady ascent of a hierarchy, the accumulation of expertise in a profession or movement through positions towards mature stability**” (Nicholson, 1996, p.162, emphasis added).

“a job or profession that you have been trained for, and which you do **for a long period of your life**” (Longman Dictionary of Contemporary English, 2007, emphasis added).

Both definitions indicate that a career is something that takes place over a long period of time; it is something you are ‘trained for’ or ‘accumulate expertise’ in. This view of careers was conceptualised in a thriving economic climate, one in which organisations took control of career management and where employees would work for just a small number of organisations in their working life. Training and development was provided by the organisation and in return loyalty and progression were expected. Fifty years ago when entering an organisation the employee could expect that the relationship with their employer would only be ended by retirement (Howard & Bray, 1988). These definitions of the term career are taken from recent publications so the stability of this view in current writings can be seen. For many, this is still the predominant view of “a career” one that involves managerial advancement and increasing financial rewards.

The traditional view is a very structural perspective containing little or no consideration of individual factors or internal processes. One’s success is defined by external variables such as job title or status and comparisons between individuals can easily be made. In summary, the traditional view of the career concept is based on the idea that a career takes place within a handful of organisations, it is something that requires dedication, training and brings with it clear rewards. However, in times of perpetual change this view is no longer sufficient, the workplace is much more fluid and individuals’ needs are more varied. The following section examines in detail the reasons why the traditional view alone is insufficient to encompass the complex career patterns of individuals today.

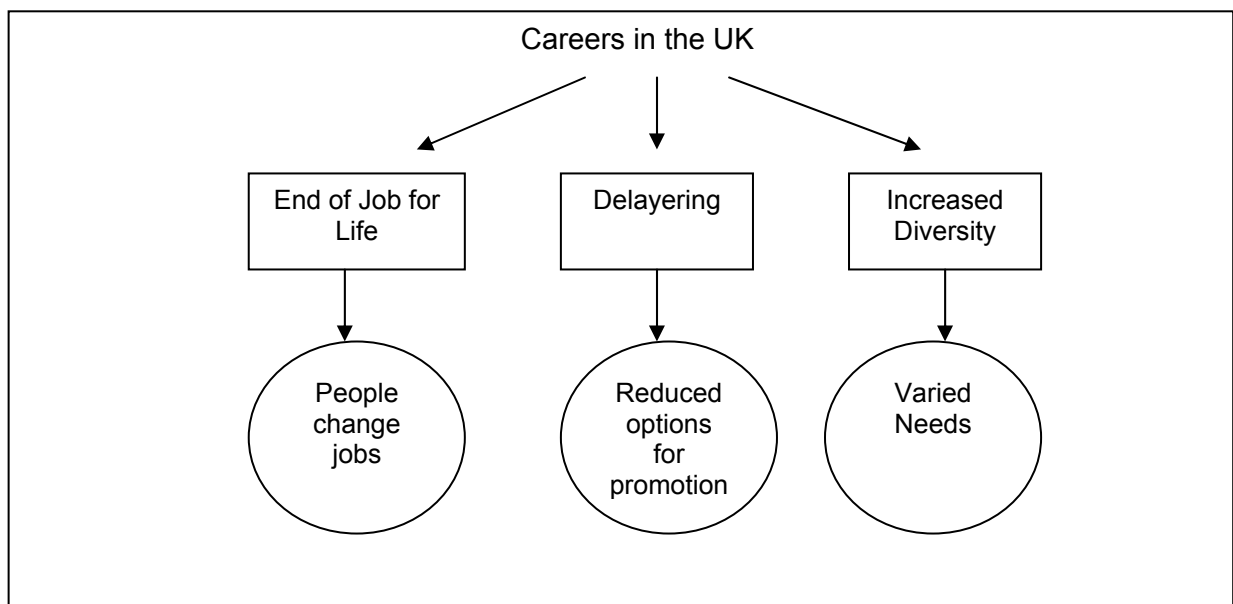
2.1.3 Reasons for reconceptualisation

Section 2.1.1 describes the tremendous changes that have occurred in the world of work over time. These changes have had a dramatic impact on both the way in

which careers are enacted within organisations and on the way individuals perceive the concept. The existence of continued change in the way we work means that the traditional view of careers is no longer sufficient to conceptualise the concept. In Figure 2.1 taken from Steele and Francis-Smythe (2007) the current trends affecting careers in the UK are summarised (Arthur, Inkson & Pringle, 1999; Baruch, 2004; Herriot & Pemberton, 1995). In the following paragraphs these trends are examined in turn. The trends are discussed in relation to the traditional career concept to highlight the reasons why it is no longer applicable today.

The changes in our working practices have resulted in a difference to the working relationships that exist between employees and employers. Traditional relationships were long lasting and more secure than those that exist now. The concept of a job for life, meaning long term stability within one organisation, no longer exists for the majority of UK employees. This has resulted in a need for individuals to change jobs sometimes several times during their working life.

Figure 2.1 Changes to working practices and the implications for careers.



This has caused significant changes to the working relationship between employer and employee. Researchers have explained these relationship changes using the concept of the psychological contract. This is defined as the unspoken promise detailing what the employer gives to the employee and what the employer can expect in return (Baruch & Hind, 1999). Two types of psychological contract are commonly discussed: relational contracts, based around loyalty and commitment (Rousseau,

2004) and transactional contracts, short term relationships with a narrower focus on a specific organisational need, relationships that are easily terminated (Arnold, 1996). The transactional contract is becoming more common and is in conflict with the traditional perspective of careers as this view suggests that careers take place within only a few organisations and have a long term focus (Freese & Schalk, 1996).

The career development an employee receives impacts on the way the psychological contract is perceived (Rousseau, 2004). This implicit contract plays a key role in career management as fulfilment of the psychological contract has been found to have a positive impact on behaviour at work (Sturges, Conway, Guest & Liefoghe 2005). Freese and Schalk (1996) describe how the psychological contract can explain variations in behaviour in the workplace and its relationship to work values. Fulfilment of the psychological contract is based on matching the needs of the individual with the supplies of the organisation. This is discussed in more detail in section 2.3 where congruence and its relationship to careers is considered.

The second change highlighted in Figure 2.1 is the removal of management layers leading to what is described as delayed organisations. In the last twenty years many organisations have implemented flatter organisational structures thus creating less opportunity for the hierarchical progression described by the traditional approach. Progressing through the management ranks has been called the linear career concept (Brousseau, Driver, Enroth & Larsson 1996), where individuals receive more responsibility and authority with each career move. Brousseau et al. (1996) describe how this view of careers is deeply rooted in American culture where high emphasis is placed on upward mobility. One of the impacts of removing the opportunity for this type of progression is a feeling of dissatisfaction among those employees who do want to progress in the traditional way (Freese & Schalk, 1996). The removal of management layers causes a dilemma for organisational career management systems as these generally focus on the linear concept. If opportunities for this form of career development are reduced, organisations need to consider how they can provide an alternative approach to development. Consideration of alternative approaches is not aided by the traditional view of careers.

The final trend highlighted in Figure 2.1 shows the increasing diversity in the workplace. Early descriptions of careers include reference to a hierarchical trajectory, assuming that reaching senior positions within an organisation is the

ultimate goal. Traditionally white males heavily dominated the workforce, many of whom were in pursuit of hierarchical advancement in keeping with the traditional perspective. Recent years have seen male domination of the workplace decrease due to an increase in the number of females entering the workforce on both a full and part time basis (Bradley et al., 2000). Despite these increases women have still been shown to be the main care giver for children in the home meaning their career needs may be somewhat different to the needs of men (Sekaran & Hall, 1989). For many women the traditional definition of careers is not applicable to them (Hakim, 2006). The role of gender in the career concept is discussed in more detail below.

One area of diversification that has recently received a lot of attention (e.g. Avery, McKay & Wilson, 2007) is the ageing workforce. As a result of increasing life expectancy in the UK people are not only living longer but also working longer. At the same time more young people are choosing to stay in education for longer periods of time and the birth rate has been declining. Turner and Williams (2005) state "It is projected that there will be one million fewer working age people under 50 and three million more aged over 50 by 2022". This is likely to have a huge impact on the career paths that are followed and the way in which careers are developed. Research has shown that what we want from work changes with age (Nicholson, 1996). For example, certain behaviours related to responsibility, commitment and reliability are likely to increase with age whereas those related to ambition, trainability and flexibility are likely to decrease (Arnold, 1996). These behaviours link to career values and to consideration of what individuals want from their career. If ambition is likely to decrease with age the ageing workforce is less likely to be provided for by the traditional conception of the term career, which centres on hierarchical progression. However, it does suggest that older workers may be well suited to the requirements of the current view of careers.

In fact this traditional perception actually precludes a large proportion of the workforce from having a career (Barley, 1989). Guest (2004) explains that diversification has created greater flexibility in the nature of psychological contracts that exist and reports on the need for frameworks that can usefully analyse these changes in employment relationships. A framework that is flexible and covers a broad range of career needs and values is needed to support career development in today's workplace.

This section has described the main trends affecting careers in the UK and at the same time has highlighted the inadequacies of the traditional career concept. All of the trends described suggest the way we conceptualise the term needs to be much broader to support individuals without a job for life, to account for the reduced opportunity for advancement due to delayering, and provide for a greater diversity of needs. What people want or expect from their work and/or their career will vary (Freese & Schalk, 1996) and traditional career theory does not allow for this. Instead it proposes just one method of approaching a career, through hierarchical advances. The changes described have led to a need to reconceptualise the term career to ensure its relevance to the workforce of today.

2.1.4 Current views

To ensure the career concept is broad enough to encompass the changes described above new definitions aimed at reconceptualising the term have been proposed. For the purpose of this thesis these definitions will be referred to as the current perspective, for example:

“the sequence of employment related positions, roles, activities and experiences encountered by a person” (Arnold 1997, p.11)

“a set of occupational experiences and roles that make up a person’s working life” (Olsson, 2003)

“A person’s course or progress through life” (from the Oxford English Dictionary, in Savickas, 2002).

When compared to the traditional definitions, it can be seen these are broader and encompass a greater variety of career behaviours, enabling more people to be described as having a career. The key differences in the new definitions are summarised here as:

- **Making no reference to hierarchy or progression** - instead, they describe a “sequence” or “set” of experiences with no suggestion that these should involve promotion or upward mobility. This enables retraining, lateral and even downwards moves within or across organisations to be considered as a career.

- **Considering non-traditional work roles** - they use phrases such as “occupational experiences” and “employment related positions” meaning they are not just considering jobs that take place Monday to Friday between 9.00am and 5.00pm. These phrases could include full time study, part time work, temporary work and even domestic responsibilities to be included under these new definitions. This opens up the term to ensure it applies to many more people.

In line with the changes described above these current definitions take the emphasis away from management progression as the driver of career success. As Arthur and Rousseau (1996) state:

"Management always used to be something to which you aspired. Now some companies avoid the term altogether, or use it to mean facilitation, self-management or taking your turn at project leadership. Disconnecting careers from status and hierarchy dislodges traditional assumptions behind career success." (p. 31).

The current perspective on careers allows for the greater diversity of needs in the workplace by moving away from the hierarchical approach and as a result allowing for people to combine work and career needs with their home and lifestyle needs. There is a much greater focus on the individual in these new conceptualisations. This is in line with the view of idiosyncratic psychological contracts that are negotiated by and for the individual (Freese & Schalk, 1996; Guest, 2004). In relation to the trends discussed above these new definitions allow for flexibility and lateral movements so the end of the job for life phenomenon leading to a need to change job roles and organisations does not pose a problem. Similarly the decreased emphasis on management progression means that layering is not an issue for these new views either, as that is not the sole purpose of a career. Finally a greater focus on individual needs and a broader definition of the term means that the increasing diversity within the workplace can also be encompassed.

With the pace of change seen within organisations, career planning and management is becoming a more difficult task, and one for which the one size fits all approach will no longer apply. There has been a need for a new definition of the term career and this has been met with the proposed definitions outlined above. These broader definitions provide the view of careers that will underpin this thesis. The aim is to include as many people as possible as having a career and to discuss

careers in a more holistic sense. The first task of the research process described here was to find a model that was applicable to these new career realities, one that could be effective in describing careers today, applicable to a wide range of employees and show potential for supporting career management and planning from both an individual and organisational perspective. The following section first discusses some additional theoretical components of the career concept before introducing the main career models.

2.2 Career Theory

Research into careers has spanned many decades and as a result the literature on the concept has been described as “multidisciplinary, multi level and difficult to distil” (Milward, 2005, p.163). Boerlijst (1998) argues for a facet model of careers that aids clarity of focus. The following section aims to take a facet approach by firstly introducing some of the individual components of career theory and then examining popular career models from different theoretical perspectives.

2.2.1 The Internal and External Career

Now that the concept has been defined in both an historic and current perspective, this section examines the dichotomy that exists between the idea of the external and internal career. The dichotomy is particularly prevalent for the current career perspective. The external career has been described as:

“the realities, constraints, opportunities and actual job sequences in the world of work” (Derr & Laurent, 1989).

The external career is defined by factors outside the individual, for example, by organisations, politics and economics. The external career refers to the actual job opportunities available as well as to the formal stages and roles defined by organisations (Schein, 1996). It is heavily influenced by organisational culture and work based rewards. An individual’s external career will vary according to the types of behaviours that are rewarded by the organisation and the openings that are available both within and outside the individual’s current place of work. The idea of an external career is in keeping with the traditional definitions of the term as many of the components of the external career are observable to other people, such as job title or organisational status. To a large extent the external career is out of our

control as individuals. The types of changes discussed above have had a large affect on the external career (Schein, 1996) as they have redefined the way careers are enacted.

In contrast, the internal career has been described as:

“a person’s own subjective idea about work life and his or her role within it” (Van Maanen & Schein, 1977).

The internal career is defined and owned by the individual. It incorporates lifestyle factors, for example family responsibilities and chosen leisure pursuits as well as work based career values. A key question when considering the internal career is “What do I want from work?” (Derr & Laurent, 1989). It is about the way the individual defines success and the type of work they enjoy doing. As such the internal career will vary greatly between individuals within the same organisation, same department and even those in the same job.

It could be argued that in an age of uncertainty and a working environment defined by perpetual change that the internal career, the component that is within the individual’s control, should be the focus of careers guidance and career management. However, it is important to remember that careers still take place, on the whole, within an organisational context and as such aspects of the external career may place limitations on the ways in which careers can be developed (Baruch, 2004). It is argued here that an awareness of both the internal and external career is needed. Both are important components of the career concept. The internal career is important for raising self awareness of what is important and the external career is important for ensuring issues of practicality are adhered to. Awareness of both facets should aid the achievement of career success.

2.2.2 Career Success

Seibert and Kraimer (2001) define career success as the accumulated, positive, work and psychological outcomes that arise through work experience. Traditional views of the career concept see career success as being job centric and related to position, salary and reward. This view has held strong in the research literature with many studies focusing on material manifestations as indicators of career success (Heslin, 2005; Sturges, 1999). In contrast, current concepts see success more holistically

and as closely related to individual self-fulfilment. These two views are often described as objective (material) and subjective (holistic) career success. Salary and number of promotions are common methods of measuring objective career success, both of which are externally verifiable (Seibert & Kraimer, 2001). Pryor and Bright (2003) illustrate this perspective by saying:

“Using the analogy of the sand pile the traditional view of career success was to build an ever greater pile of sand with the addition of each grain until you had a heap (such as climbing the corporate ladder with increasing material rewards).” (p. 124)

The objective view of career success is transparent and observable. It is easy to measure and enables comparisons between people about their relative success. The objective view of career success fits well with the traditional definitions of the career concept. However, importantly, it also places a limit on the number of people that can actually achieve a high-level of career success. This number has been limited further in recent years with the trend described above for organisations to remove management layers from their structure (Heslin, 2005).

Subjective career success provides an alternative view. It refers to an individual's personal judgements of their career achievements (Ng, Eby, Sorenson & Feldman, 2005). Heslin (2005) comments that lifestyle issues such as balance and contribution to worthwhile causes are popular perceptions of career success today alongside more traditional factors such as power and advancement. Heslin (2005) recognises the need to distinguish between career success and job satisfaction. For example, it is possible for a multi millionaire to feel that their career has been successful particularly in objective terms but it does not necessarily mean that they enjoy their job. To help understand more about what career success means to the individual, Derr and Laurent (1989) produced five internal career success maps. Derr (1986) suggested that a person's feeling of career success encompassed a balance between these five maps with some being more important than others. The five career maps they describe are:

- 1) Getting ahead (upward mobility)
- 2) Getting secure (company loyalty and sense of belonging)
- 3) Getting free (autonomy)
- 4) Getting high (excitement of work itself)
- 5) Getting balanced (equilibrium between personal and professional life)

These show the variety of factors that are thought to be important in determining success. They also highlight that non-work factors can contribute to feelings of career success by considering the importance of balance. Derr's (1986) model provides a broader perspective than sole consideration of objective career success and is more in line with subjective career success and the current views of the career concept.

Perception of career success can be affected by many factors including: cognitive ability, motivation level, family circumstances, obligations outside of work, socio-economic status and demographic factors (Bretz & Judge, 1994). It has been suggested that there are demographic differences in the way that we experience career success. Objective career success, in the form of status and salary, has been shown to be more important for men than for women (Powell & Mainiero, 1992; Sturges, 1999). It also appears that objective career success is less important for older workers (Kalleberg and Losocco, 1983; Sturges, 1999) suggesting either that our perceptions of career success evolve over time (Heslin, 2005) or that there are generational differences. It is important to consider an individual's perception of success to get a true understanding of a person's motivation for working and to support them in planning for their future (Granose & Portwood, 1987). Schein (1993) suggested that organisations need multiple ladders and multiple reward systems to provide for the needs of the majority of the workforce. This approach to organisational career management would be in keeping with the current perspective and the increased workplace diversity. This demonstrates the need to truly understand the individual when examining careers. The following section considers the role of individual personality traits and demographics on the career concept.

2.2.3 The role of personality, values and demographics in shaping the career concept

It can be seen from the discussion above that the current concept of careers takes a more individual approach, the internal career focuses on aspects that are unique to each individual and career success can be defined in individualistic terms. As such the following sections consider a range of individual factors and their relationship to the career concept. Firstly the role of personality and values are explained followed by the effects of gender and age.

2.2.3.1 Personality and Values

The role of personality and values in careers has been written about extensively in the literature (e.g. Caruthers, 1968; Erdogan & Bauer, 2005; Judge & Bretz, 1992; Seibert & Kraimer, 2001; Smola & Sutton, 2002; Tokar, Fischer & Subich, 1998). Many career models, both old and new, contain an element of individual differences based on values or personality. Historically the suggestion that personality is linked to career choice, satisfaction and performance has been a consistent theme in the career literature. The traditional approach to vocational choice was based on trait theory, which is a form of personality analysis.

One of the most well known models of personality is the five factor model (Thurstone, 1934; Norman, 1963). Also known as the big five the personality traits within the model are: extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. In a review of the literature on personality (operationalised as the big five) and vocational behaviour (operationalised using Holland's vocational personalities), Tokar, Fischer and Subich (1998) report that neuroticism, extraversion and conscientiousness are most frequently associated with career related issues. Seibert and Kraimer (2001) examined the relationship between the five factor model and career success. Their results showed positive relationships between the personality factor extraversion and salary level and number of promotions demonstrating a relationship between extraversion and objective career success. Negative relationships were shown between agreeableness and career satisfaction and between openness and salary level. Finally they report a positive relationship between agreeableness and salary level for those working in people-oriented occupations demonstrating the importance of context in the relationship between personality and careers. In a longitudinal study designed to investigate managerial careers across the lifespan, Howard and Bray (1988) report links between job level, positiveness and self-confidence. Personality has also been linked to pay and organisational culture preferences (Cable & Judge, 1994, Judge & Cable 1997). In a meta-analysis Ng et al (2005) found personality to be more strongly correlated with subjective career success than with objective career success. Whilst this research relating to the role of personality in careers is useful in that it helps us to explain the individual differences within careers. Until agreement can be reached about the stability of personality across the lifespan the conclusions that can be drawn from it and the applications of these theories are limited. This is discussed later in this section.

Closely linked to the concept of personality, particularly in the literature on careers is the concept of individual values. Elizur and Sagie (1999) define values as: “desirable states, objects goals or behaviours, transcending specific situations and applied as normative standards to judge and to choose among alternate models of behaviour” (p.74). There is some disagreement as to what actually constitutes a value with some researchers likening them to needs (Super, 1973) some to attitudes and some to goals (Dose, 1997). There is however, general agreement that values can be learned through experience and the more experience gained relating to that value the stronger it will be (Dose, 1997). The research on values has often been separated into life values and work values (Ros, Schwartz & Surkiss, 1999). However, Elizur and Sagie (1989) suggest that the two are closely linked. Ros et al. (1999) describe work values simply as “expressions of basic values in a work setting” (p. 49). Elizur and Sagie’s (1999) research found health, happiness and love were the most important life values and fair supervisor, interesting job and responsibility to be the most important work values. Of these factors only responsibility could be said to have close links with the traditional definition of the career concept. The other life and work values are more closely related to the individual perspective conceptualised in the current definitions of careers described above. Hagström and Kjellberg (2007) discuss a structural shift that has been seen meaning materialistic values have become less important and post materialistic values being seen as more important. It is suggested that this is a direct result of changes in working practices based on the assumption that our values are shaped by our experiences. The shift towards post materialistic values is in line with the move towards a more holistic approach to the study of careers.

The research evidence strongly suggests that personality and values are key factors in predicting career behaviours. However, as touched on above this concept is not without problems. Many argue that personality traits are stable and therefore once our vocational preferences have been identified they will remain constant throughout our lives. However, an ongoing debate exists in psychology over the stability of personality traits and whether or not they can be changed. Arnold (1996) argues that our lives are constantly changing and we face different experiences that inevitably impact upon us, “no matter what personality theorists might say” (p.123). The consistency of personality as a stable, enduring individual characteristic was challenged by Mischel (1968). He felt that personality was likely to be affected by situational variables, i.e. individuals would behave differently depending on the

situation, something that could be particularly relevant in a work situation. There is also debate concerning the stability of values (Steyn & Cotze, 2004). As stated in the previous section, research suggests that the way career success is viewed changes with age. Therefore it would appear that at least some aspect of our career related values change over time and are in fact not stable. Howard and Bray (1988) suggest that values may change due to life experiences. However, they still refer to a certain level of stability by saying:

“Although adults can and do change in their values and attitudes, the cultural influences on them in their youth leave a basic core that is less susceptible to adaptation in light of further cultural change as time goes on” (p409).

Schein (1978) recognised the power of organisational culture on individuals when entering an organisation. Culture can place strong pressure on an individual to change their values to become more congruent with the values of their organisation. This process has been termed organisational socialisation, defined by Bauer, Bodner, Erdogan, Truxillo and Tucker (2007) as:

“the process by which newcomers make the transition from being organisational outsiders to being insiders” (p.707).

Chow (2002) discusses one important role of the socialisation process, the transmission of organisational norms and values onto new employees. Despite the relative consensus on the role of values in the socialisation process they have been largely ignored in the research (Dose, 1997). A possible reason for this is that it is unlikely that individuals' values would be expected to change completely as a result of socialisation. The attraction selection attrition hypothesis suggests that individuals are attracted to organisations that are at least partly matched to their values (Scheider, 1987) and the research into selection suggests that value fit is an important part of the selection process (Rynes & Gerhart, 1990). Therefore at the point of organisational entry it is expected that there will be some degree of value match between individual and organisation. Despite this it is likely that for the socialisation process to be successful some element of value change is to be expected (Bauer et al., 2007). Dose's (1997) work value framework indicates that values related to social processes or ethics are more susceptible to change from organisational socialisation whereas personal values will be more resistant to change through these processes. This suggests that in relation to selection processes it is

most important to ensure that an individual's personal values are matched to those of the organisation, as these are less likely to change through organisational socialisation.

In summary, it can be said that both personality and values have an impact on career behaviour and perceptions of career success. There is some debate about the stability of both constructs and the factors that may contribute to change. In light of the new career realities discussed above and the existence of continued change in the workplace it could be argued that an understanding of the factors that contribute to both personality and value change will become increasingly important. This knowledge could be utilised in both career management and organisational change programmes. The structural shift in values described by Hagström and Kjellberg (2007) may be of particular importance and more research is needed to examine the changes that are being seen. This is something this research attempts to address in chapter 6.

2.2.3.2 Gender

One of the factors that impacts significantly upon our career needs and choices is gender. Nicholson (as cited in Gunz, Evans & Jalland, 2000) states, the process of evolution has created gendered status drives leaving men's status concerned with competitive dominance and women's status derived from relationships and friends. Men are traditionally viewed as more competitive than women at work and socially (Gneezy & Rustishini, 2004) and Hakim (2006) reports that whilst there is no solid evidence of cognitive differences between men and women there is evidence to suggest a difference in the value of competitiveness, with men placing a higher value on competitiveness than women. This difference may have an effect on the way in which men and women enact their careers. This difference could particularly manifest itself in relation to the traditional perspective on the career concept where hierarchical progression is important.

As discussed in the previous section, many researchers have found gender differences in work values (e.g. Elizur & Sagie, 1994, Mason, 1994 & Singh, 1994) with women more interested in being treated with respect and making money and men more interested in higher job levels, social status and autonomy (Freese & Schalk, 1996). There are two schools of thought as to how this gender differentiation in work values develops (Hagström & Kjellberg, 2007). The first is the

gender approach (Betz & O'Connell, 1989) which suggests work values are formed before entering employment. Gender differences arise as a result of traditional gender associations and these guide behaviour and work preferences. The second approach is the structural approach (Rowe & Snizek, 1995) which suggests that differences in gendered work values arise because of gender differences in the roles that people carry out once they get to work and the fact that women face greater obstacles and generally occupy lower grade positions. There is evidence to support both approaches. Hagström and Kjellberg (2007) examined gender differences in work values in a longitudinal study and found that gender differences varied over time. For example they found the highest ranking differences in altruism, which women ranked higher, and benefits and career, which men ranked higher, but these differences decreased over a three year period.

Something that has received a lot of attention in both research and in practice is known as the "glass ceiling" (Marshall, 1989) and more recently the "glass cliff" (Ryan & Haslam, 2005). Although the number of women in the workforce has increased, one place where they are still under represented is in senior management positions (McMahon, Limerick, Cranston & Anderson, 2006). A number of reasons have been suggested for this some of which are related to work and career values. Women are still more often than not the main carers for children in the home (Bradley et al., 2000; Crowley-Henry & Weir, 2007; Gallos, 1989; Huang & Sverke, 2007). Therefore, when it comes to work and careers women are more likely to have other factors that are the main priority, perhaps factors that are more congruent with the current perspectives of career and allow for lifestyle considerations. However, the current changes in the world of work have created a less dominant role for the traditional male breadwinner (Guest, 2004). This has led to an increase in work life balance for both genders meaning that the differences may start to become narrower. Roberts (1997) conducted a longitudinal study of women examining their career at three time points when the women were approximately 21, 27 and 43 by looking at labour force participation, attainment and personality. They found that participation and attainment at work was related to personality change between the ages of 27 and 43. It could be suggested that this is the time period where working women are likely to be experiencing a number of changes in their lives leading to changes in the way in which they prioritise life and work. Tokar, Fischer and Subich (1998) stress the continued importance of research into the role of gender differences in the career concept.

2.2.3.3 Age

The developmental or lifespan theories of careers, described in full below indicate that age may be a factor in shaping our career needs and values. It has already been suggested above that career success may manifest itself differently at different ages with materialistic definitions of success becoming less important over time (Sturges, 1999). Some researchers have focused on generational differences in values suggesting that they are shaped by our experiences (Westerman & Yamamura, 2007). For example, Loughlin and Barling (2001) suggest that for younger workers the concept of work life balance is more important because many of them have seen their families suffer from work related stress and they have seen the impact this can have. However, Sturges and Guest (2004) found that despite the higher value placed on work life balance new graduates can find themselves drawn into work situations where the demands upon them mean that achieving this balance becomes increasingly difficult. This suggests that whiles lifestyle is clearly important there is something else that is causing these young workers to ignore their values. Research evidence exists that suggests older workers have stronger work values than younger workers evidenced, for example, by taking greater pride in their work (Susman, 1973) or by placing a higher emphasis on work (Cherrington, Conde and England, 1979). However there is also evidence that suggests older worker may be more resistant to change in the workplace (Yeatts, Folte & Knapp, 2000).

In light of the increasing diversity in the working population and the ageing workforce as discussed above these differences in work values across the ages are likely to become increasingly prevalent. Some authors suggest that as the workplace now consists of four different generations this is leading to clashes between them over how work should be conducted (Zemke, Raines & Filipczak, 2000). Much of this has arisen from speculation, as there is limited research into how the generations actually differ. Guardo (1982) speculates about the way in which differences in generational experiences have led to stark differences in the values held by different generations. Hodge and Bender (1974) showed that a combination of generational and individual factors as well as social climate could lead to value change in adult life. It could be argued that with the event of an ageing workforce research into how and why career values change across the life span is important. This is needed to ensure smooth transition into a multigenerational workforce in the future. These generational differences have an impact on career development in organisations, adding further support to the notion that one size does not fit all. The following section introduces a

range of career models and considers their application to today's workplace and their relationship to various facets of career theory.

2.2.4 Career Models

The preceding sections have introduced the career concept both historically and currently and discussed some of the more individualistic aspects of career theory. The career literature is full of conceptual and theoretical models and these can be categorised into six different perspectives: developmental, behaviourist, differentialist, decision making, structural and organisational (Milward, 2005). Six of the most popular career theories are introduced in this section. Each theory is first described before a consideration is made of its applicability to the new career realities described above.

2.2.4.1 The theory of work adjustment

Traditional career theory focused on initial career choice using the trait approach (Pryor & Bright, 2003). This view of career choice uses interest inventories to assess individual characteristics. These are then matched to occupational environments to ensure the right person is in the right job (Betz, Fitzgerald & Hill 1989). This trait view of careers originated with Parsons' (1909) seminal work, 'Choosing a vocation based on matching people to jobs'. Parsons believed that there were three steps to making successful career choices: 1) knowledge of self, 2) knowledge of work environments and 3) some method of matching individual and work environment characteristics (as cited in Betz, Fitzgerald & Hill, 1989). Trait approaches help individuals to work through these three steps.

The theory of work adjustment (TWA), developed as part of the Work Adjustment project (Dawis and Lofquist, 1984), provides a framework for these three steps. The TWA aims to conceptualise the way in which individuals and organisations can engage in mutual need fulfilment (Betz, Fitzgerald and Hill, 1989). The theory suggests that the interaction between individuals and work environments is important because both have needs that can be fulfilled by the other (Dawis, 1980). For example, individuals have needs such as sense of accomplishment, good working conditions and security, which can be fulfilled by the organisation. Organisations need individuals that can fulfil a variety of tasks to a satisfactory standard. According to the theory of work adjustment if these needs are matched so that mutual fulfilment occurs there are three outcomes that can be expected; satisfaction (of employee with

the organisation), satisfactoriness (organisational satisfaction with the employee) and tenure. This concept of congruence and its importance in career theory is discussed in section 2.3.

The TWA provides a useful framework for thinking about careers and the relationships between individuals and organisations. It is, however limited in its applications because it does not provide a clear formula for how to achieve congruence between the individual and their environment. Instead it often takes a skilled counsellor to reconcile any differences that exist (Harper & Shoffner, 2004). One of the expected outcomes of mutual need fulfilment is tenure. In light of the move away from the job for life philosophy and towards a focus on short-term contracts this outcome may need to be revised. Many career theories are based on the TWA including Holland's model of vocational personality, introduced in the following section.

2.2.4.2 Holland's Theory

Probably the most widely known trait approach to careers is Holland's theory of vocational choice. First published in 1959 the central premise of Holland's model is that satisfaction, stability and achievement at work depend on the match between vocational personality and work environment. Holland's model (often referred to as the RIASEC model) consists of six vocational preferences arranged in a hexagon (see Figure 2.2). The preferences next to each other in the hexagon are thought to be similar and the types opposite each other are dissimilar. Holland also developed two questionnaires to enable individuals to explore their preferences: the Self Directed Search and the Vocational Preference Inventory (Parker, Arthur & Inkson, 2004). These provide a three letter code indicating the three most important vocational preferences for an individual e.g. IRA (Investigative, Realistic, Artistic).

A description of each of Holland's vocational preferences is shown in Table 2.1. The central concept of Holland's model is congruence between an individual and their work environment. A significant part of Holland's research sought to match the vocational preferences to occupations culminating in his dictionary occupational codes. This was developed by gathering data from job incumbents and by extrapolating information from similar job roles (Arnold, 2004). A selection of occupations matched to each preference is shown in Table 2.1.

Figure 2.2 Holland’s Model of Vocational Preferences

Holland’s theory has become the dominant model for vocational choice in the US (Arnold, 2003). It is also popular in the UK and used by many career services to assist people in the process of matching their own preferences to occupations to aid career decision making. Despite its popularity Holland’s RIASEC model has faced criticisms.

Table 2.1 Holland’s Vocational Preferences

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Table taken from Baruch (2004).

In an interview with Weinrach in 1980, John Holland himself discusses his view of the main limitations of the RIASEC model. These include the development and change that may occur in people’s vocational preferences over time. There is limited

research on how these preferences develop and whether or not they change. However, the premise of the model is around stability as in the trait approach to personality, despite there being limited empirical support for this notion. In the interview Holland also refers to the main criticism that has been made of the RIASEC model. That is, problems with the notion of congruence, which is central to this model (Weinrach, 1980). Holland makes two main predictions related to congruence:

1. Congruent individuals will be more satisfied and less likely to change environments.
2. Incongruent individuals will be influenced by their environment to change in the direction of congruence.

(as cited in Spokane, 1985).

This impact of congruence and Holland's model has been openly criticised. Many have examined the relationship between congruence and outcome variables but support for this relationship has been varied and not as great as that hypothesised by Holland. The inconsistency in the way congruence has been measured makes meaningful comparisons between studies difficult (Assouline and Meir, 1987; Spokane, 1985) limiting the generalisability of this work. Similarly there are several methods used to measure vocational personality (Camp and Chartrand, 1992) some studies use one of the questionnaires developed by Holland, others use revised versions and different approaches. The relationships found between congruence and outcomes have been weak. This has caused some researchers to discard the theory (Spokane, 1985). Arnold (2004) discussed 14 possible reasons for the low correlations found in meta-analyses on Holland's work. Of these he suggests five are of high importance:

1. Holland's theory may omit some key constructs
2. Occupation may be an inadequate conceptualisation of environment
3. The three-letter coding of people and environments may be inadequate
4. The environment may not have been measured precisely enough
5. Congruence studies may have suffered from sub-optimal measurement and statistical analysis of congruence.

Taking each of these in turn Arnold (2004) first discusses the exclusion of work life balance and lifestyle issues in the theory. He suggests that Holland's work focuses on the question "What can I do and what would I like to be doing?" whereas it may be

more important to consider “What do I want to achieve and how would I like my life to be?” (p.99). The second question is more clearly related to the current perspectives of careers.

Secondly Arnold (2004) questions the focus on occupations as a measure of work environment by questioning whether the requirements of the same occupation differ according to organisational cultures. He suggests some alternative environment measures including industry sector, work organisation, work department and work group.

Next Arnold (2004) considers the use of the three letter code saying that this alone does not explain the difference between individuals adequately. For example, no consideration of individual's actual scores on each preference is made. Two individuals with the same scores could have very high or very low scores. Thus exhibiting different levels of need. In the same section Arnold (2004) explains that ignoring the three lowest scoring preferences may be limiting our information about the type of work an individual should be encouraged to avoid.

The final two suggestions that Arnold (2004) believes may contribute highly to the small correlations found relate to the measurement of congruence. Arnold (2004) highlights the difficulties of congruence research by explaining the measurement issues involved with having the same individual measure the self and the environment such as common method variance and the difficulties associated with asking experts to assess jobs they have not carried out themselves. Finally he discusses the problems with the use of congruence measurements. Tranberg, Slane and Ekeberg (1993) note that the measures used to examine congruence are often based on a one or two letter match. A full consideration of these issues is made in chapter 4 of this thesis.

A final criticism is made by Baruch (2004) who suggests it is a model of initial vocational choice and therefore it may be more appropriate for early careerists than for those later in their career thus reducing its application to career management processes within organisations. This may also make it less relevant to the increasing numbers of adult career changers seen in the workplace.

So it can be seen that whilst Holland's theory dominates the career literature it is not without critique. It may also not be relevant to the current perspectives on careers

due to the exclusion of lifestyle factors and the relatively static notion of personality traits, which do not allow for elements of change to impact on our career decision making (Pryor and Bright, 2003). The following section considers the role of change and the lifespan on careers by examining developmental career theories.

2.2.4.3 Developmental Theories

Many theorists have speculated on how the career changes over time and with the collection of work experience (e.g. Super, 1957; Levinson, 1978; Schein, 1978; Greenhaus, 1987). These theorists have proposed a variety of models that show how the career develops and changes across the lifespan. Each developmental theory suggests a number of stages to the career. Some believe these stages are related to age and that we all progress through them in time, others posit a more fluid approach. There is reasonable level of agreement between the main lifespan theorists that there are three main phases of a career, these are:

- 1) Early Career – this is generally seen to be an exploratory phase where individuals are just entering their career, finding out about themselves and about their organisation.
- 2) Mid Career – normally the individuals will have established themselves in a career by this stage and will be concerned with advancement and development.
- 3) Late Career – the period leading up to retirement for most individuals, this often involves taking on a mentoring role, passing on one's skills to others.

As indicated above some theorists believe that we go through these stages just once and they are guided by biology. Others believe some of us will never leave the exploratory stage or that we can go through the stages more than once as if in a cycle, particularly if we change career path.

A summary of lifespan theories of careers showing the proposed relationship between age and stage can be found in Table 2.2. This shows a reasonable level of agreement between theorists. There is general agreement that early career or explorations lasts into the mid twenties, next mid career or establishment brings us into our mid forties and finally late career begins in our mid forties to early fifties.

Table 2.2 Summary of developmental approaches to careers

Author	Year	Stages
Super	1957	0-14 Childhood 0-25 Search and Enquiry 25-45 Establishment 45-56 Continuity or maintenance 56+ Decline or disengagement
Levinson	1978	0-17 Childhood and adolescence 17-22 Transition; early adult 23-40 Settling down with age 30 transition 40-45 Transition; mid life 45-60 Middle adulthood and culmination with age 50 transition 60-65 Transition; late adulthood 65+ Late adulthood
Schein	1978	0-21 Growth and search 16-25 Entry to the world of work 16-25 Basic Training 17-30 Starting full time employment 25+ mid career 40+ late career 40+ decline
Greenhaus	1987	0-25 Entry to labour world 18-25 Entry to organisation world 25-40 Establishments and achievements 40-55 Plateau career 55-retirement Late career

Adapted from Baruch (2004).

The implications of lifespan differences in careers are that organisations may need to provide different career support to those at different career stages (Arthur et al., 1999). The developmental perspective recognises, to some extent, the importance of individual differences. Individuals in the entry/exploration stage are likely to need advice on making career decisions and the opportunity to gain experience in a variety

of areas to assist this process. Those in mid career may want to continue down a specialist-training route to become an expert in one area or they may want to progress in the traditional way and become a general manager, alternatively they may wish to increase the breadth of their experience by moving around different parts of the organisation. Finally, those in late career may want support to assist with the transition to retirement. They may want to get involved in mentoring others and succession planning or do something else entirely.

The main contributor to the developmental theories of careers has been Donald Super (e.g. 1939, 1980). His work has spanned 50 years during which his developmental theories were continually revised and updated (Herr, 1997). The main development of his perspective was a movement towards the consideration of non-work elements that contribute to the career experience (Blustein, 1997). Suggestions have been made that the career stages will be different for men and women due to gender differences in career behaviour and role salience (Herr, 1997). This recognition of the individual perspective provides a potential role for the developmental approach to careers in the new career realities described above.

The developmental theories began with very rigid views about the ages and biological basis of the stages described (Blustein, 1997). This led to criticism of this approach. Arthur et al. (1999) explain that, as a result, developmental theories have become more cyclical than linear, with people experiencing stages more than once and at different times in their lives. Super himself stated that the stages were not biologically determined. Instead they were affected by lifestyle factors (Super, 1990) meaning that stage and age are not necessarily related.

The developmental theories offer an element of flexibility, if not related to biological age, that could be applicable to the new definitions of careers. However, Super himself admits that what he has created is not a testable theory but a loosely unified set of theories dealing with specific aspects of career development (Super, 1984 in Herr, 1997). As a result the developmental approach can be useful in describing the experience of individuals at various points in their working lives but it is difficult to see how it can be utilised to improve career choice, planning and development. Savickas (2002) recommends that careers researchers focus on developmental perspectives first and careers second, suggesting that the developmental perspective can be used to underpin other models of career development and that knowledge of them is essential for any perspective on careers.

So far this section has outlined a framework for careers based on mutual need fulfilment, a trait based approach and the lifespan perspective. The next career model to be introduced is based on career skills in the form of competencies.

2.2.4.4 The Intelligent Career

This model of careers has been developed in response to the changes to the definition of the concept. According to Arthur (1994) we can now only speak of a "boundaryless career" as careers are no longer determined by specific employers but by the unpredictable interactions between organisations and individuals. Arthur (1994) used the term boundaryless because he believes the boundaries between organisations, professions and management tiers are breaking down. As a result it has become much easier to move in your career. For example, more people now retrain and change profession during their working lives, others continue in the same profession but change sector to gain a different experience. In order to cope with this phenomenon of boundarylessness he felt that individuals needed to exhibit certain skills and behaviours to improve their ability to navigate in these new career realities (Defillippi & Arthur, 1994). The intelligent career model is based around what Arthur (1994) termed career competencies. These competencies describe the skills he believed were necessary for individuals to develop and cope with the boundaryless career. They are described in Table 2.3 below. An individual's career competencies are assessed using a card sort based on Q-sort methodology. The card sort identifies the individual's strengths and weaknesses in relation to career competencies and from this development areas can be identified. Arthur et al. (1999) suggest that Knowing How is the competency that most individuals and organisations focus on and the Knowing Why and Knowing Whom are often neglected.

Whilst this approach provides a useful framework for career development it is different from the congruence or mutual need fulfilment approach as this theory is skills based. It suggests that you can increase your competency to improve some aspects of your career. This perspective is in many ways more flexible than the trait based approaches and provides something tangible for organisations and individuals to develop. However, some authors feel the idea of careers being described as boundaryless is a step too far. Arthur responds to this query by agreeing that for some there will always be boundaries to a career. For example, geographical boundaries, professional boundaries and/or industry boundaries (Arthur & Rousseau,

1996) as well as our own personal boundaries. These can be categorised as subjective boundaries that the individual perceives to exist. The things that they decide will limit their career for example, self esteem. There are also objective boundaries. These are real barriers that are imposed by external factors. For example, organisations that only recruit at entry level, such as the police force or organisations that only take graduates from red brick universities (Gunz, Evans & Jalland, 2000). Some authors do not believe that the three headings encompass all of the necessary factors that are important in career planning. Recent work by Haase and Francis-Smythe (2007) has suggested that there are in fact seven career competencies and these have been shown to impact significantly on both objective and subjective career success. The career competency approach can be applied to any individual in any career but it does not help with initial career choice or important career decisions, something that is increasingly important as the range of choices open to us increases (White, 2007).

Table 2.3 Arthur's career competencies

Definitions taken from Arthur et al. (1999 p.122).

2.2.4.5 The Protean Career

In response to the changes occurring in career realities Hall (1996) describes the organisational career as dead but suggests that what he terms the protean career is

flourishing. This concept has been guided by what Shepard (1984) calls the 'path with the heart' referring to the importance of individuality and intrinsic satisfaction, concepts directly linked to the current perspective. Building on this Hall (1996) coined the term the "Protean Career" and defined it as:

"a process, which the person not the organisation is managing. It consists of all the person's varied experience in education, training, work in several organisations, changes in occupational field etc. The protean person's own personal career choices and search for self-fulfilment are the unifying or integrative elements in his or her life. The criterion of success is internal (psychological success) not external" (Hall & Moss, 1998, p.27)

The term Protean comes from the name of the Greek god Proteus, who could change shape at will, suggesting that individuals are able to change direction and do not have to stay within their initial career path. The main differences between the protean career and the traditional view are summarised in Table 2.4 (taken from Hall, 1996).

Table 2.4 Differences between traditional and protean careers

	Traditional Career	Protean Career
Career Management	Provided by the organisation	Down to the individual
Career Structure	Normally within one or maybe two organisations. Individuals often remain in the same type of work for their entire working life.	Often individuals will change organisation several times. They may also change the type of work they are doing.
Career Success	Ultimate aim is to achieve a high status, high salaried position.	Ultimate aim is to reach self-fulfilment.
Criteria for Success	External – defined by organisational/social expectations.	Internal – defined by individual, personal desires.

It can be seen from Table 2.4 that the protean career provides an individualist perspective to careers. Under this view the individual drives careers management

and the individual defines career success. This means that careers can take many forms and has implications for the psychological contract in that it supports the notion that these have become idiosyncratic.

The protean career seems an ideal umbrella term for the new definitions of the career concept. It does not view careers as hierarchical and it accounts for increased diversity by leaving much of the conceptualisation down to the individual. However, it does create some potential problems for individuals. These were summarised by Hall and Mirvis (1995) in their discussions of the impact of the protean career for the older worker. Firstly, some problems are associated with increased choice. As the definition of career is broadened it creates a challenge by increasing freedom of choice, which can be inherently stressful (White, 2007). Secondly, the organisational career, which is most in keeping with traditional definitions, allowed for a sense of identity to be tied into the organisation or to a job role. As opportunities for this type of career are removed individuals have to create their own identities that are self defined. Hall and Mirvis (1995) suggest that this is likely to be most difficult for the older worker. However, it could be argued that this will create problems for all workers, as they will need support to navigate their careers and build an individual identity (King, 2001). The protean career does not mention the role of the organisation at all, instead leaving every aspect of career development to the individual. It is, however, important to recognise that careers are still enacted within organisational boundaries (Baruch, 2004). Issues such as the availability of jobs as well as personal constraints could limit an individual's ability to achieve career success as defined by them.

Five career theories have been presented so far in this section. A brief summary of the pros and cons of these in relation to their application to new career realities is provided in Table 2.5.

Table 2.5 Summary of career model pros and cons in relation to the current career concept.

Model	Pros	Cons
Theory of work adjustment	Provides a framework for the consideration of a variety of individual needs.	Does not provide a specific mechanism for matching individual needs to environments
Holland's vocational personality	Provides a mechanism for matching individual and organisational characteristics.	Does not consider lifestyle issues. Static perception of personality.
Lifespan perspectives	Have been revised and the age and stage links have been removed allowing for greater flexibility.	Does not aid career choice, planning or development.
Arthur's Intelligent Career	Takes a skills based approach to careers aimed at supporting individuals managing their own careers	Does not support career choice or the process of career decision making.
Hall's Protean Career	Based on the current perspective of careers.	Does not mention the role of organisations at all. May present problems for the ageing workforce.
Career Anchors	Provides a framework for considering talents values and motives including a consideration of balance and lifestyle issues.	Does not provide a specific mechanism for matching individual needs to environments

2.2.4.6 Career Anchors

The final career model to be introduced here is the career anchor model, developed by Schein (1978) and to some extent this model takes a more traditional approach with one part of it focusing on upwards progression into general management roles. However, at the same time it takes a more contemporary, broad view of careers by

considering lifestyle needs, security and sense of service to the community. Schein (1978) describes career anchors as the result of interaction between the individual and their working environment, these factors combine to aid career decision making.

A brief summary of the eight career anchors generally acknowledged by researchers as making up the model can be found in Table 2.6 (e.g. Arnold, 1997; Barth, 1993; Brindle & Whapham, 2003a; Evans, 1996; Igbaria & Baroudi, 1993). Schein has conducted interviews with several hundred managers from various sectors that have supported the existence of these eight anchors within a wide range of occupational groups (Schein, 1992).

Career anchors provide an unusually broad view of what is important to an individual by combining talents, motives and values. Other career models focus mainly on talents (e.g. Arthur, *Intelligent Careers*) or mainly on motivation (e.g. Holland, *Vocational Personality*) and less focus on values (Feldman & Bolino, 1996). Arnold (2004) expressed the belief that career anchors may provide a more all encompassing view of an individual's career aims than Holland's model because career anchors include a consideration of lifestyle factors. This view is illustrated by the following example:

"Let us suppose for a moment that Mr. X's aim is to enter an occupation that allows him to live close to his workplace, remain resident in his current area, earn sufficient money to care for elderly relatives, have enough time to spend with his children and work fairly autonomously. No doubt there are connections between these aims and Holland constructs but something like Schein's notion of career anchors is likely to say more about Mr. X's choices" (Arnold, 2004, p.97).

This inclusion of lifestyle factors makes the career anchor model particularly suited to exploring the new definitions of career described above. Anchors such as lifestyle, autonomy and sense of service refer to needs outside of the workplace that can be met by the individual's career. This is one of the reasons authors such as Gunz, Evans and Jalland (2000) believe career anchors remain as relevant at the end of the twentieth century as when they were originally conceptualised in the 1970s. The model contains an element of flexibility in its recognition of the role of work experience and feedback in defining an individual's career anchor(s) (Yarnall, 1998). This acknowledgement of the role of experience distinguishes career anchors from theories of initial vocational choice (Danziger & Valency, 2006) which suggest our

career motivations are much more stable. DeLong (1982) believed that career anchors have a wide range of applications and are suited to individuals seeking a career change as well as to assisting organisations with career planning and management (CPM) unlike other models designed to support just one of these functions.

One of the criticisms the career anchor model has received is that its development lacks empirical support, (Brindle & Whapham, 2003b; Feldman & Bolino, 1996; Igbaria & Baroudi, 1993). There is no clear evidence explaining exactly how the first five career anchors came out of the longitudinal study or how the final eight anchors were chosen and verified, making it difficult to refute this criticism. The initial research was conducted with an all male sample of managers from the US thus reducing belief in the model's generalisability. Schein (1978) acknowledges this sampling bias and states his belief that despite this, in his opinion, career anchors have broad applicability to a whole range of other non-management occupations. Despite these issues, the career anchor model has enjoyed enduring popularity through its inclusion in several main text books on careers (Arnold, Cooper & Robertson, 1996; Arnold, 1997; Arthur, Hall & Lawrence, 1989; Bradley et al., 2000; Herriot & Pemberton, 1995;) and by being the focus of several research papers, almost biannually since 1980 (Bester & Mouten, 2006; Burke & Desza, 1987; Crepeau, Cook, Goslar & McMurtrey, 1992; Danziger, Rachman-Moore & Valency, 2008; DeLong, 1982; Feldman & Bolino, 1996; Feldman & Bolino, 2000; Katz, 1994; Nordvik, 1991; Ramakrishna & Potosky, 2003; Suutari & Taka, 2004; Wood, Winston & Polkosnik, 1985; Yarnall, 1998). This research is detailed in chapter 3 of this thesis.

The breadth of the career anchor model is one of the reasons this model is chosen as the focus of this thesis. When considering the cons of the other theories presented in Table 2.5 the career anchor model only shares one of these. That is, 'no mechanism for matching individual and organisational needs' and this is something this research seeks to address. Therefore, it could be said that career anchors are the most suitable model to underpin careers today. It has sufficient flexibility to allow for both work and non work values. There is some consideration of the possibility of value change brought about by variations in work experiences, yet still enough stability to enable the model to be useful to both individual and organisational career management. However, as considered above the model is not

without criticism. A detailed examination of these criticisms and the approach this research takes to overcome them is presented in the following chapter.

Table 2.6 Definitions of the eight career anchors

Definitions in Table 2.4 taken from Schein (1993).

As with Holland's model congruence has been described as an important component of the career anchor model (Schein, 1978). However, it is not as extensively researched. The next section discusses the idea of congruence in relation to careers, and the work related outcomes associated with it.

2.2.5 Congruence

The discussion of career models provided above highlights the importance of congruence between an individual and aspects of their work environment. The notion of congruence forms the basis of vocational counselling where counsellors try to establish the individual's needs and skills and match these to an occupation. Congruence is the term used in research into Holland's vocational preferences (Tinsley, 2000). It is also referred to as fit particularly in the theory of work adjustment (Lofquist and Dawis, 1991) and in writings on methodology (e.g. Kristof-Brown, 2007). The terms congruence and fit will be used interchangeably throughout this thesis.

In the careers literature congruence is most commonly examined in relation to Holland's theory (Tinsley, 2000) and as discussed above with this theory only modest correlations have been found between congruence and outcomes. Schein (1978) believed that congruence between career anchors and work environment would lead to greater job satisfaction and increased organisational commitment. Feldman and Bolino (1996) added to this list of outcomes by including increased work effectiveness, job stability, work role adjustment, psychological well-being and reduced role conflict. Tranberg, Slane and Ekeberg (1993) comment that despite its importance as a concept in many career models surprisingly little research has been conducted and they report that only 27 published reports examine it specifically in relation to Holland's model. Even less published research has examined congruence and career anchors. This research is detailed in chapter 3. The measurement of fit is considered in detail in chapter 4. Typically, fit is operationalised as the supply of the environment minus the desires of the worker (Tinsley, 2000). By far the most common outcome examined in relation to congruence and careers is job satisfaction (Tinsley, 2000). However organisational commitment or loyalty is also considered with relative frequency (Mathieu & Zajac, 1990). The studies of congruence have shown that on average it predicts approximately 12% of the variance in job satisfaction, suggesting that a large proportion of the variance is affected by other factors (Harris, Moritzen, Robitschek,

Imhoff & Lynch, 2001). Arnold (2004) suggests that career salience may moderate the impact of congruence on work related outcomes. For example, if career salience is low congruence may be less important and therefore predict less of the variance in job satisfaction than for those who experience high levels of career salience. Each of these concepts job satisfaction, organisational commitment and career salience are considered below.

2.2.5.1 Job Satisfaction

As stated previously, job satisfaction is the most commonly investigated outcome in congruence studies with Spokane (1985) pointing to the magic .30 as the average correlation between congruence and satisfaction. Job satisfaction has been described as the ultimate goal of careers counselling and is one of the most widely studied outcomes in the careers literature generally (Jepsen & Hung, 2003). Job satisfaction is however a complex concept with many determinants. Tranberg, Slane and Ekeberg (1993) have criticised some congruence studies for oversimplifying the concept as some studies suggest that interest congruence should be a strong predictor of job satisfaction alone without consideration of any other factors.

One extensively researched factor relating to job satisfaction is age and whilst research indicates that there is some relationship there are disagreements as to the exact form of this relationship. Research by Clark, Oswald and Warr (1996) supports Crites' (1969 in Jepsen & Hung, 2003) findings showing a U shaped relationship with job satisfaction. This relationship shows job satisfaction as being high at age 20, dipping towards age 30 and then showing a gradual increase towards midcareer. In contrast Kalleberg and Losocco (1983) suggest that the relationship is linear with job satisfaction increasing with age. They believe this is because older people have better quality jobs with, for example, higher income and increased status. Their research showed a gradual increase that plateaus in the forties and then rises again in the fifties and continues to rise until the end of working life. Possible explanations for age related differences in job satisfaction are that expectations may lower with age (Clark, Oswald & Warr, 1996) or that age differences in work values mean that factors such as autonomy, finance and intrinsic rewards are less important as we get older (Kalleberg & Losocco, 1983).

Gender differences in job satisfaction have also been examined but again no consistent relationships have been found. Some suggest that job satisfaction

manifests itself differently in men and women. It has been suggested that this occurs as a result of organisational socialisation processes (Mannheim, 1993) with women exhibiting higher job satisfaction than men (Sousa-Poza & Sousa-Poza, 2003). Others indicate that there are no differences (Al-Ajmi, 2006; Witt and Nye, 1992). Possible reasons for gender differences in job satisfaction have been discussed including the possibility that women's expectations are lower than men's leading to higher satisfaction (Clark, 1997). Others have discussed the role of workplace discrimination leading to lower levels of job satisfaction in women (Al-Ajmi, 2006).

A significant body of literature exists that examines the dispositional sources of job satisfaction, those factors outside of congruence that contribute to job satisfaction. Blood (1969) found that the protestant work ethic (a belief that individuals can fulfil duty to God through hard work) correlated positively with job satisfaction. In a meta-analysis examining the relationship between the big five model and job satisfaction Judge, Heller and Mount (2002) found moderate correlations for neuroticism and agreeableness. They suggest possible reasons for this as individuals high on neuroticism are likely to experience more negative events and make negative appraisals of situations, whereas those high on agreeableness are more likely to have a positive attitude generally. Tranberg, Slane and Ekeberg (1993) found that some of Holland's vocational personalities were more likely to experience job satisfaction than others. While Igbaria and Baroudi (1993) found a positive relationship between the TF career anchor and job and career satisfaction. This literature indicates that it is important to consider the both the effects of congruence but also the direct effects of constructs in congruence research.

2.2.5.2 Organisational Commitment

Organisational commitment refers to the commitment and loyalty exhibited by an employee towards their employer. Organisational commitment has been defined and measured in a variety of ways making this a complicated concept to examine. Buchanan (1974, in Cook and Wall, 1980) distinguishes between three components of organisational commitment:

1. Identification pride in the organisation; the internalisation of the organisation's goals and values
2. Involvement – psychological absorption in the activities of one's role
3. Loyalty – affection for and attachment to the organisation; a sense of belongingness manifesting as a wish to stay" (p.40)

Kristof-Brown and Jansen (2007) found that organisational commitment is the outcome most strongly predicted from person-organisation (PO) fit. Kammeyer-Mueller (2007) even suggested that organisational commitment alone could be used as a direct, although simplistic, measure of PO fit. If an individual exhibits a high level of commitment to their organisation Kammeyer and Mueller (2007) argue that this indicates they are congruent with it. It has been suggested that organisational commitment may be reducing due to the changes to the psychological contract described above. As far back as 1978 Schein felt that young people were starting to place less emphasis on stability in their career and as such were beginning to exhibit less loyalty to their employer. Some have suggested that in light of the new short term contracts that now exist it may no longer be realistic to talk about organisational commitment. However, the fact that organisations still play a significant part in individuals' careers it could be argued that it is not unreasonable to expect some levels of commitment to the organisation to be exhibited.

Some evidence for a relationship between organisational commitment and gender has been shown. However, as for job satisfaction these show mixed results. Mathieu and Zajac suggest that gender affects organisational commitment but others such as Al-Ajmi (2006) and Bruning and Snyder (1983) report no gender differences. Kid and Smewing (2001) found that supervisor support was a more important precursor to organisational commitment for women than for men suggesting that different factors contribute to organisational commitment for the different genders. Differences have also been found in the relationships between age and organisational commitment. Cohen (1993) explains that the theoretical argument for a relationship between organisational commitment and age stems from the lifespan theories which suggest that intention to leave an organisation is likely to decrease as an individual gets older. A meta-analysis conducted by Cohen (1991) found that career stage moderated the relationship between OC and outcomes. For example as indicated in the theoretical argument Cohen (1991) found that the relationship between OC and turnover was stronger in the earlier carer stages.

2.2.5.3 Career Salience

It has been suggested that career salience may moderate the relationship between congruence and outcomes (Arnold, 2004). Career salience concerns how important an individual's career is to them. It has been defined as

“the importance of work and a career in one’s total life” (Greenhaus, 1971 p. 210)

and

“the relative prominence and personal significance of a career within the individual’s total life” (Allen & Ortlepp, 2004).

The concept of career salience has been relatively ignored in the career literature. What has been written assumes that individuals inherently have a relatively high level of it (Greenhaus, 1971). Research shows that males generally exhibited higher levels of career salience than women (Greenhaus, 1973). These findings showed that males with higher career salience were in careers more congruent to their ideal. Greenhaus (1973) explains this by assuming that individuals high in career salience are more likely to seek out favourable working environments because they place greater emphasis on the importance of this. In their longitudinal study of managers Howard and Bray (1988) found that high commitment to a career from a young age was a strong sign that individuals would go on to have a successful career suggesting a possible link between salience and success.

What has not been considered in the literature to date is the effect career salience has on work related attitudes. If, as found by Greenhaus (1971), individuals with high career salience choose occupations to which they are better suited then, according to Schein (1973) they should also experience higher levels of job satisfaction and organisational commitment. Goulet and Singh (2002) suggest that career commitment is related to both organisational commitment and job satisfaction but no empirical data exist to support this claim. This is something that this research seeks to address and is considered in chapter 9.

Blau (1985) notes that concepts such as career salience are influenced by both personal and situational components. For example personal influences include: marital status and age. Greenhaus’ (1971) finding that males have higher career salience than women relates to the traditional roles of men and women. Men were traditionally the main earners in relationships and women are more likely to be the main homemaker and carer for children. The changes in working patterns may alter this finding. Other situational factors include, stability of work, and relationship with supervisor. All of these are external or organisationally determined which indicates

that the organisation has an impact on an individual's career. The final section of this chapter examines this role by focusing on career management.

2.3 Career Management

This chapter has provided an introduction to the theory behind and the components of the career concept. It has also outlined the major transformations that have been seen in working practices in the UK and explained the impact these have had on careers. The final section of this chapter examines the way careers can be managed both by and for the individual. Career management involves considering the needs of the individual and those of the organisation with the aim of increasing congruence between the two (Bolton & Gold, 1994). King (2004) suggests that career management aims to; “find an optimal, rather than a perfect, fit between the organisation's and the individual's perspective. This means finding not the ideal solution for either party but a solution which is satisfactory for each party” (p. 7). It is proposed here that the career anchor model could be utilised in both organisational and individual career management processes although to date it has mainly been applied in individual career counselling (Evans, 1996).

2.3.1 Career management within organisations

Despite all of the changes in the world of work and the move towards a more holistic view of the career concept, the majority of careers still take place within organisations (Baruch, 2004). As a result the organisation has a major part to play in their structure and how they are played out. There is a limited amount of published research on career management interventions within organisations (Budhwar & Baruch, 2003).

Organisations have faced criticism in recent years for the role they play in their employees' career management. Part of this is due to their increasingly hands off approach. This is leading to individuals being forced to manage their own careers (Stickland, 1996). The reasons for this hands off approach are related to the changes in the workplace described in section 2.1.3. A term that is used frequently to describe the activities managed by organisations is Career Management and Planning (CPM). Budhwar and Baruch (2003) described this as:

"a comprehensive approach to all the activities and techniques facilitated by the organisation which are of concern with the career development of its employees. These include two aspects; the planning (i.e. preparation for the future) and management (i.e. operating and activating those plans) as seen and performed from the organisations point of view." (p.703).

To be successful CPM needs to be supported by commitment from senior managers (CIPD, 2003), the organisational culture and the attitudes of its senior managers are likely to have a significant impact on the success of any career management interventions. Garavan (1990) showed only 50% of senior managers offered support for career development yet all saw a need for it. CPM is a difficult task for organisations, especially when it is taking place against the backdrop of change and uncertainty described at the start of this chapter. Hirsh (2005) describes the three main problems with implementing CPM in organisations. The first is that it is not clear cut; "It (CPM) relies on a complex web of people management practices, often mainly designed to achieve other purposes, such as resourcing, training or performance management"(p.12). Secondly, it has to deal with tensions between individuals' and organisations' needs. This can be challenging, as organisations are historically not very good at viewing employees as individuals with external needs. Lastly, effective CPM requires persistent and consistent attention over fairly long periods of time. Employees and line managers have often become cynical about career development because initiatives in these areas can be seen to come and go with changes in HR staff (Hirsh, 2005). This creates the risk of raising employee expectations when implementing CPM and then seeing those expectations unfulfilled if the CPM initiatives change (Granrose & Portwood, 1987).

To fulfil employees' expectations a number of different techniques are employed by organisations. A useful distinction made by Arnold (1997) is "between interventions that are closely connected with employees day to day work (such as developmental appraisals and mentoring) and those that take place separately from the work itself (for example career planning workshops and individual career counselling)" (p. 284). The interventions not related to an individual's day to day work can still be managed by an organisation or they can be something that individuals seek out themselves external to the organisation. Research shows that effective CPM can improve employee ability and motivation, organisational productivity and innovation. In turn this results in improved productivity, service levels and revenue (King, 2004) Links to

organisational commitment have also been shown (Sturges, Guest & Mackenzie Davey, 2000).

A recent survey showed that the majority of organisations still provide only hierarchical career development opportunities for their staff, (Ralph 2003). This suggests that many processes are in need of updating to ensure they are in line with the current perspectives on careers. If the definition of career success is being broadened out to incorporate the whole person then organisations need to recognise that it is the whole person who comes to work (Hesketh & Considine, 1998). It is no longer accepted policy for employees to leave their home lives at the door when they come into work (Crowley-Henry & Weir, 2007; Daziel, 1992; Huang & Sverke, 2007). This needs to be reflected in organisational policies by enabling more opportunities for flexible working options and consideration of a diverse range of needs. One method that organisations have used to address this issue is something called the dual career ladder. As Brousseau et al. (1996) state, a dual career ladder provides opportunities for employees to pursue either a managerial/executive career path or to become a technical specialist. This is a move towards providing alternative options to the management career. However, it is still only providing something for two types of people, those who want to be a manager and those who want to specialize. Schein (1978) suggested another alternative organisational model for career development in the shape of a three dimensional cone. Within this model he described three methods for career development. These were:

1. Vertical, this meant progression through the ranks or upwards from the bottom to the top of the cone, this type of progression is in line with the traditional definitions.
2. Radial, meaning movement towards the inner circle, increasing one's centrality in the organisation or moving from the outside of the cone towards the middle.
3. Circumferential, this means moving from one function to another or in terms of the cone moving around the outside of the shape (as cited in Dalton, 1989).

When discussing the career anchor model Schein (1978) suggested that organisations should have multiple ladders and reward systems in place to provide for the needs of each anchor.

Whilst organisational CPM is not a simple process there are also disagreements about who should own the process. A study of 325 UK employees by Crawshaw (2006) showed that, in fact, 98% of the sample saw line managers as responsible for their career development. Perhaps surprisingly 64% said that HR had played no part in their career development. There seems to be an increasing pressure on line managers to take more responsibility and to generally be more active in the arena of career management. The importance of the line manager role has been highlighted by several researchers (e.g. Hutchinson et al., 2007). Yarnall (1998) believes it is unlikely that employees can successfully manage their careers without any form of support from their line manager. The role of the line manager in an employee's career development cannot be assumed and is unlikely to happen automatically. A survey of over 700 UK based organisations conducted by the CIPD (2003) found only five per cent felt that the majority of their line managers were trained to support career development, 17 per cent felt it was about half, 13 per cent were unsure, 43 per cent felt it was only a minority, and 17 per cent stated that none of their line managers were trained to support career development. There are difficulties associated with line managers being responsible for CPM activities, even for those who feel capable. The main difficulty is caused by the conflict of roles; Yarnall (1998) describes this as the split between judge and helper while Strebler, Bevan and Robinson (2001) refer to it as the difference between judge and coach. Both metaphors are referring to the fact that line managers are expected to judge an employee's performance and to take action if this is not satisfactory. Expecting the same line manager to then support that same employee's development can cause resentment and make employee's defensive when any feedback is received (Yarnall, 1998).

It could be argued that organisational CPM needs a new framework to enable it to move away from traditional vertical approaches to something that is more flexible and suited to the current perspectives of the new career realities. A strong framework or model could be used to assist line managers in the career development of their staff. It will be argued throughout the course of this research that the career anchor model could actually be applied in this way.

2.3.2 Career self management

In light of the current working environment outlined at the start of the chapter, organisations are increasingly expecting individuals to play a part in managing their

own careers (Kahnweiler, 2006; Parker et al., 2004; Stickland, 1996). Some suggest that organisations are reluctant to invest in staff as they no longer have a guarantee that they will be able to offer them long term security. Or even if they can it is generally more accepted now for people to change career and employer so there is no guarantee they will stay, even if they are invested in. Hirsh (2005) describes the organisational response to this situation:

"The predominant organisational response however was to back off all talk of careers except in negative terms. Career development strategies in the mid 1990s seemed to list what was not on offer - no jobs for life, no career paths, less upward movement and above all no promises. What was on offer instead was development - such a vague term that it can mean anything or nothing".

Since the 1990s there has been an increasing decline in the amount of investment made by organisations into career development. Organisations began to draw back from career development activities, seeing them as:

"an expensive luxury unsuited to an era of downsizing and outsourcing" (Arnold, 2006,)

Therefore the emphasis has fallen much more onto the individual to manage his or her own career. So there has been a shift in expectations and in many cases it is now up to the individual to ensure that they remain employable. Stickland (1996) outlines three main reasons for this shift:

1. the increase in short term contracts,
2. the pressure is on in many organisations for everyone and you can no longer hide in the background,
3. no-one else is going to do it for you

Individuals taking control could be seen as a positive change with the individual taking control of their destiny and having more freedom to do what they want. Employees will feel less indebted to the organisation and may be able then to prioritise their own needs more than ever before. Kahnweiler (2006) believes that whilst many employees are happy to buy into the idea of managing their own career, many do not know how to go about it.

However, as argued by Baruch (2004) careers do not take place in a vacuum. Instead they are acted out within organisations which have rules, systems and procedures of their own. A study of 388 organisations in the UK showed low participation rates in self directed development activities (Yarnall, 1998). This perhaps suggests that even if self directed initiatives are on offer, individuals do still need additional support. The organisation still has some role to play if they are changing the rules on career management then they need to ensure they have equipped their staff with the skills to cope with these new rules.

In summary it can be said that careers can be viewed from at least two different perspectives (Rosenbaum, 1989). The first of these is the individualistic model, where the individual is responsible for self-managing their career. The second view of careers has been described as the structural model (Rosenbaum, 1989). This approach still acknowledges the role of organisations in careers. Some organisations do aim to provide a clear developmental career path for their employees. There are many different types of interventions that can be used, some use formal succession planning, where individuals are selected for certain roles and then trained in the skills required for that role. Other approaches are more flexible, such as mentoring, personal development plans, or development centres, which aim to look at an individual's skills and suggest areas where they might like to move and be successful. There is a third more balanced view – this is an integrated approach, this is the approach this study aims to take using career anchors as a framework.

2.4 Chapter summary

This chapter began by introducing traditional and current definitions of the career concept. In doing so the reasons for the reconceptualisation of the term were explained and the new career realities introduced. Next, a number of facets of career theory were discussed including the internal and external career, career success and the role of personality, values and demographics. From this two important issues arise. Firstly, the stability of facets such as personality and values across the lifespan are unresolved. This has implications for careers as it implies that our needs may change over time with additional life experiences. Secondly, it appears that both gender and age differences exist in the some of the facets relevant to careers. With the increasing diversity that is being seen in the workplace this fact has important implications for the way in which career support is structured and

suggests a need for a flexible approach. Six career models were introduced within the chapter and their relationship to the current perspectives on careers was considered. This section outlined the rationale for the selection of the career anchor model as the focus of this research. The breadth of the model and its inclusion of aspects relevant to both the traditional and current perspectives of careers was highlighted. The enduring popularity of the career anchor model in academic literature and its potential for supporting career development for individuals and organisations was discussed. At the same time the fact that the career anchor model is not without criticism was also explained. The importance of congruence in the careers literature was highlighted. The matching of aspects of the individual to aspects of the working environment is one way to examine the utility of career models through their impact on work related outcomes. Two important outcomes were discussed: job satisfaction, organisational commitment and one potential moderator of the relationship between congruence and outcomes, career salience. Finally, the process of career management was discussed from both an organisational and individual perspective. This shows that most organisations are still considering careers in a traditional sense. This is evidenced by their career development processes. It also highlighted the increasing demand on individuals to manage their own careers.

In summary this chapter has presented an introduction to career theory and outlined the rationale for the selection of the career anchor model as the focus of this research. The following chapter is devoted to the career anchor model, explaining its development, measurement, uses and the way in which it is examined and built on within this thesis.

Chapter 3

Career Anchors

3.1 Career Anchors

The previous chapter introduced the career concept. This chapter will concentrate on the career anchor model which forms the focus of this thesis. As a reminder, this model has been selected because of its breadth. It incorporates the more traditional career values such as general management as well as the more modern values such as lifestyle and sense of service. The model also allows for a certain element of flexibility in value set caused by life or work experiences. The career anchor model has experienced enduring popularity despite there being limited empirical evidence to support it. This chapter begins by exploring the history of the model and outlining its development before looking at each of the career anchors in depth. It then examines the measurement of career anchors, critically reviews the career anchor literature to date identifying the gaps in this and finally introduces the studies that have been undertaken and are presented in later chapters of this thesis.

3.1.1 History of career anchor development

The career anchor model evolved from Schein's longitudinal research on a group of 44, all male, alumni from a masters programme at the Sloan school of management, Massachusetts Institute of Technology (MIT). The original aim of this research was to improve the understanding of managerial career development (Schein, 1993). Each of the alumni was tracked for a ten year period. The structure of the study is presented in Table 3.1

Table 3.1 Schein's initial study structure

TIME	METHOD OF DATA COLLECTION
Final year of Masters program	Initial interviews and surveys of values and attitudes.
6 and 12 months after graduation	Second interviews
5 years after starting work	Third Interview
10-12 years after starting work	Final interview

The full details of this study are not readily available. However, it is known that 44 participants remained at the final interview stage. The main finding from this longitudinal work was that patterns formed over time in participants' career histories. It was from these patterns that Schein began to identify what he termed career

anchors. From the alumni career histories Schein (1978) found a great deal of consistency in the reasons given for career decisions made. An example of the career history data gathered can be found in Appendix 1. Based on the data collected in this initial study of 44 alumni, Schein (1978) identified five career anchors and labelled them as:

- *Technical/Functional Competence (TF)* – individuals exhibiting this career anchor showed a desire to become a specialist in their chosen area.
- *General Managerial Competence (GM)* – these participants' career histories demonstrated a strong need for leadership and management of people and situations.
- *Autonomy/Independence (AU)* – included individuals who felt constrained by organisational bureaucracy and prefer to set their own schedule of work.
- *Security and Stability (SE)* – these individuals showed a need for either geographical stability or employment security above other work related factors.
- *Entrepreneurial Creativity (EC)* – participants exhibiting this anchor demonstrated a desire to innovate and create something from an idea fall under this anchor.

It is not clear from the information published exactly what approach Schein took to analysing the career history data and defining the five anchors. To validate the proposed model another sample of 50 managers took part in a structured interview process with Schein (an example of the interview structure can be found in Appendix 2). At the end of the interview managers were asked to identify their career anchor from the five proposed. Schein found the managers could successfully recognise patterns in their own career histories and match these to one of the named career anchors. At this stage Schein (1978) believed there might be more career anchors that would emerge from future research, as he was aware of the limitations of the sample. Specifically he suggested the following as possible career anchors:

Basic Identity – “it may well be that for some people, just to achieve and sustain an occupational identity functions throughout their lifetime as an anchor. This anchor would be similar to security as an anchor but implies even a more deeply felt need for basic identity.” (Schein, 1978, p.170)

Service to Others – “Social work, some aspects of medicine, some aspects of teaching and some aspects of the ministry allow the person to express basic needs, talents and values to work with others in a helping role; the interpersonal competence and helping are ends in themselves rather than means to an end, as in the managerial anchor group” (Schein, 1978, p.170)

Power, influence and control – “It is not clear from the research done thus far whether needs for power and a talent in exercising it are a separate anchor for some people or are a portion of what we have described as the managerial anchor...However, one might find among politicians, teachers, doctors and ministers some who find that their anchor is indeed the exercise of control and influence over others.” (Schein, 1978, p.171)

Variety – “There may be people in all occupations who are restless spirits, but not in the same sense that the entrepreneur is one. Rather, one may find people whose talents cover a wide spectrum and whose basic needs and values are to express the full range rather than to exercise more limited talents in depth over a shorter period of time. Flexibility is one of their major values, boredom one of their major fears.” (Schein, 1978, p.171)

After conducting research on career anchors with Schein, DeLong (1982) rephrased these additional anchors as:

Identity – Identity oriented people are motivated by the status and prestige of belonging to certain companies or organisations.

Service – Service oriented people are concerned with helping others and seeing the change their efforts made. They want to use their interpersonal skills in the service of others.

Variety – Variety oriented people desire a large number of different types of challenges. They seek careers that provide a maximum variety of assignments and work projects.

In further revisions of the model the anchors, pure challenge and lifestyle were added by Schein (described in Table 3.2). Service remained as part of the model but variety and identity were removed. Unfortunately, it is not clear from the literature exactly how, why or when this change was implemented. It is now acknowledged by various authors that there are eight career anchors as shown in Table 3.2 (Arnold, 1997; Barth, 1993; Brindle & Whapham, 2003a; Evans, 1996; Igbaria & Baroudi, 1993).

The lack of available evidence outlining how and why the model was developed as it was and why the eight anchors described in Table 3.2 were chosen (Brindle & Whapham, 2003b; Feldman & Bolino, 1996) demonstrates where one of the main criticisms of the career anchor model stems from. This dearth of evidence means it is difficult to rebuff the criticisms made. Several researchers have attempted to empirically examine the underlying structure of the model with varying success. As described above the initial research was conducted with an all male sample of managers from the US thus reducing the opportunity to claim the model's generalisability. Schein (1978) states the belief that career anchors have broad applicability to a whole range of other non-management occupations but to date there is limited evidence to support this claim, something this research seeks to address. The following section explores the notion of career anchors in more depth by considering what they are and how Schein (1978) proposed they could be used.

3.1.2 What are career anchors?

Career anchors could be described as forming part of our internal career (see section 2.2.1). They provide a mechanism for understanding an individual's self perceived talents, values and motives. When developing the model Schein chose the term career anchors because he believed these combinations of talents values and motives would pull an individual back to a specific career path, like an anchor. In his view, the primary career anchor, the one that is most important to an individual, is the one thing that they would not give up if forced to make a choice between two career moves (Schein, 1978).

Table 3.2 Definitions of the eight generally acknowledged career anchors

Definitions in Table 3.2 taken from Schein (1993).

Schein proposed that our career anchor develops over time and with experience of work. In particular he believed we learn three key things through experience that help us to understand our career anchors. These are:

1. Skills and competencies – through experience we begin to understand what we are good at. We learn this through our own self-assessment and from the assessment and feedback of others.
2. Motives – we learn what we want from life as we experience different things. We find out about the things we like and dislike and this may alter our original ambitions.
3. Values – we find out about the things we value in our work and our personal lives when forced to make decisions. We learn how we feel when our environment does and does not fit with those values.

Learning about these three career components makes it easier to understand what it is that we want from our work environment (Schein, 2006). Schein (1978) believed that it was only through work experience that the primary career anchor could develop. It could be argued that through this experience an individual is learning as much about what they do not want to do as they are about what they do want to do. Work experience is an important component of self-awareness raising, a factor identified by Stickland (1996) as important in the self management of one's career.

It has been suggested that it can take up to ten years of working before a person discovers their primary career anchor (Schein, 1978). However, this view limits the applications of the model by restricting the populations that it can be used with. It is proposed here that career anchors can be applied at all levels and at all career stages, as long as it is understood that anchors may be more susceptible to change within an early career sample consisting of people who are still developing and gathering work experience. Other researchers have successfully examined career anchors of early careerists (e.g. Jiang & Klein, 2000) and some with non-management populations (e.g. DeLong, 1982; Tan & Quek, 2001). Schein (1978) himself indicated that career anchors were applicable to individuals in a broad range of occupations. The literature supporting the use of career anchors with non management samples is limited and the research presented here seeks to address this by examining their impact on a non managerial sample.

Once established, Schein (1978) believed that the primary career anchor was an increasingly stable component of an individual. However he did state that in some, rare circumstances they would change with new life and work experiences. The current working climate, described in section 2.1.2, means that the pace of change is constantly increasing, having an effect on work, family, social and personal lives. As a result it may be that career anchors will become more susceptible to change.

When the model was proposed it was thought that individuals have just one career anchor. Their primary anchor, and it is this that helps to guide and direct career decisions (Schein, 1978). Since then others have questioned this, believing that it is possible for individuals to have more than one career anchor. Indeed findings show this to be relatively common (Feldman & Bolino, 1996; Ramakrishna & Potosky, 2003). Despite this Schein (1993) argues that it is important to try and identify an individual's primary anchor based on his belief that not all needs are equally important. He states that a career can fulfil a broad range of needs but the primary career anchor is the factor that is most important and helps us to understand our priorities. It is suggested in this thesis that an individual will find it useful to know how important each of the eight career anchors are to them. It proposes that creating a hierarchy with the most important anchor (or primary anchor) at the top and least important anchors at the bottom (indicating areas of work that may need to be avoided). This approach provides richer information and avoids the risk of neglecting useful information that may not be considered when focusing only on the primary anchor. This approach is based on Arnold's (2004) posit that within Holland's model of vocational personality it can be just as important to know what is not important to a person in terms of work and careers as it is to know what is important. To date no research has examined low scoring career anchors. The research presented in this thesis will address this.

Once an individual's career anchors have been developed and defined Schein (1978) believed that congruence between the individual and their environment was important. Schein (1978) stated that congruence would lead to greater job satisfaction and increased organisational commitment. He also suggested that individuals in incongruent environments would either leave their organisation or need to find a way to fulfil their career anchor outside of work through hobbies and other interests. Feldman and Bolino (1996) believed that career anchor-environment congruence would also be related to increased work effectiveness, job stability, work role adjustment, psychological well-being and reduced role conflict. As discussed in

chapter 2 the research into congruence and the career anchor model is limited despite it being described as a central component of the model (Feldman & Bolino, 1996; Schein, 1978). The research presented in chapter 9 of this thesis aims to add to this literature by exploring empirically the relationship between career anchors, congruence and outcomes.

This section has outlined some of the important components of the career anchor model including their development in individuals. The following section examines each of the eight career anchors in detail.

3.1.3 The career anchors in detail

This section outlines each of the eight anchors as described by Schein in more detail. The descriptions given are taken from the published work of Schein between 1978 and 2006.

General Management (GM)

The general management anchor describes a need to manage people and or organisations. Three key individual competencies are described by Schein (1978) in connection with this anchor:

1. analytical competence, the ability to analyse information and solve problems in uncertain conditions.
2. interpersonal competence, the ability to supervise and lead others towards the achievement of organisational goals.
3. emotional competence, the ability to be stimulated rather than exhausted by a crisis, the ability to exert power without guilt.

Individuals anchored in GM enjoy responsibility and achievement and measure their success in terms of status, number of promotions and income. Their view of career success is objective. Status, and the amount of responsibility these individuals are given contribute to their feeling of success. They will define themselves in relation to their organisation's success or failure. They are likely to include details of the size and scope of their organisation when introducing themselves. The GM anchor is closely related to the traditional definitions of the career concept given in chapter 2. It is concerned with hierarchical advances and externally derived measures of success.

Technical/Functional competence (TF)

Individuals anchored in TF define career success as achieving the status of expert in their chosen profession rather than through hierarchical progression and monetary rewards. They place a high value on getting the job right and increasing their skills in one particular area. They are not interested in management per se, preferring instead to take on a mentoring role allowing them to pass their skills on to others or a functional management role that enables them to remain in their area of expertise. They are not averse to management roles but general management roles that take them away from their specialism would not be of interest. Once in a job these individuals appreciate opportunities for learning and development, as they are keen to continuously improve their skills. Their sense of identity is strongly tied to their profession and to any professional organisations associated with this. Opportunities to attend specialist conferences and events would be valued by individuals with this anchor. The TF anchor describes the second branch of the dual career ladder described in chapter 2 where individuals can choose to specialise rather than to progress upwards. This demonstrates that some organisations are recognising this need for recognition as expert within some of their employees and identifying this as a specific career path for them to follow.

Autonomy and Independence (AU)

Individuals defined as having the AU anchor in Schein's (1978) original studies actively sought out positions where they were free from organisational constraints. This allowed them more freedom to pursue their particular line of work and to set their own work schedules and the appropriate lifestyle balance. They find organisational life to be restrictive and are often required to make a trade off between personal freedom, high income and status because of the way in which careers within organisations are currently provided for. Within an organisation individuals with the AU anchor value trust and flexibility from an employer. In return Schein (1978) found them to be hard working, flexible and highly motivated employees. Personal satisfaction is achieved through setting one's own schedule of work whilst still being able to pursue lifestyle interests. The AU anchor is an example of the breadth of considerations of career anchors as it is not included in other career models. This anchor would fall under the current perspective of the term career where success is determined by individual standards.

Security and Stability (SE)

The SE anchor is concerned with receiving an element of security from your career. People anchored in SE will be amenable to letting their organisation determine their career path and will be easily socialised into the organisations norms and values if they feel this will guarantee their security is assured. They value familiarity, trust, honesty and security. If these are fulfilled Schein (1978) found they make very loyal, committed employees. Some research subsequent to Schein's has suggested that this anchor is actually split into two; organisational security where the focus is on remaining with a particular employer for the foreseeable future and geographical security where the individual has a need to remain in a particular geographical location for their career, this possible split is discussed in more detail section 3.2.3.

Schein (1978) comments that in his original sample individuals anchored in security initially felt a sense of failure and guilt for what they perceived to be a lack of ambition. It took time to accept that success for them was determined through stability, security and a reasonable level of work life balance. At the time of Schein's original research the current conceptualisation of careers would have been unheard of. The idea of determining career success according to your own standards would have been unusual. The changes described in chapter 2 may cause difficulties for individuals with the security anchor as the loss of the job for life ideal and existence of perpetual change make it difficult for organisations to offer security. In response to this, Schein (1996) proposed that if the external world was uncertain these individuals would find a way of providing security for themselves. It may be that this comes from ensuring employability through life long learning.

Entrepreneurial Creativity (CR)

Schein (1978) describes individuals with this anchor as having a strong need to create something of their own. Success is measured by innovation, creating something that bears their name or is entirely their own achievement. Individuals anchored in creativity are good at generating ideas and are constantly looking for ways to improve things. Their creativity and achievements become an extension of themselves and a basis for their identity. They are likely to recognise and embrace the need for change and will be motivated by it. In the workplace this anchor is most likely to be fulfilled for individuals who become entrepreneurs. However, it may still be possible for organisations to provide some elements required by this anchor by

taking a broader approach to their career planning strategies. Schein (1996) proposed that this anchor may not be fulfilled by the working environment but instead suggested that individuals anchored in entrepreneurial creativity may be able to find a way to fulfil this need through an out of work activity or hobby.

Pure Challenge (PC)

This anchor describes a need for constant challenge and competition in the working environment. Individuals with this anchor enjoy working through difficult problems and will feel successful when they are able to solve problems that others cannot. Schein (1993) found that individuals with the PC anchor display incredible persistence in the pursuit of problem solving. They enjoy the feeling of winning and value the opportunity to compete and to achieve. Individuals anchored in PC set high standards for themselves and prefer to be surrounded by like minded people. This anchor is a demonstration of the variety of factors covered by the career anchor model, making it suited to the current career concept.

Sense of Service (SV)

Individuals anchored in SV need to feel that their work is making a contribution to society and has meaning. They value fairness and ethics and want their community values to be matched by the values and policies of their organisation. If these values are matched they are likely to exhibit a high level of passion for their work and loyalty to their organisation. Schein (1993) suggests those with the sense of service anchor should be involved in organisational policy making as they will feel successful if their contributions to society are recognised. The SV anchor is very much individually defined and in keeping with the current definitions of the career concept as described in chapter 2. Within organisations individuals with the SV anchor will need to understand what contribution they are making to their work environment. The inclusion of SV within the career anchor model is another demonstration of the breath of the model and its applicability to the workplace today.

Lifestyle (LS)

This anchor refers to the balance between work and home life for the individual. Individuals exhibiting the LS anchor will feel successful if they achieve a satisfactory balance between the needs of their work and the needs of their families, friends

and/or hobbies. They like to have flexibility and understanding from their employer. Schein (1996) found that in return they would offer strong time management and loyalty. They may need to work part time to balance their needs but not necessarily. It is more important that an open dialogue exists between employee and employer to discuss and try and meet these needs. The LS anchor recognises the importance of non-work activities in the career concept demonstrating again the breadth of considerations encompassed within the career anchor model.

The first sections of this chapter have outlined the career anchor model in detail. Describing its history, explaining what an anchor is and introduced the specific components of each anchor. For the career anchor model to be useful in the management of careers for both individuals and organisations there needs to be a mechanism for the measurement of career anchors. The following section outlines the ways in which career anchors have been measured and explains the measurement approach taken for the studies described in this thesis.

3.2 Career Anchor Measurement

In order to apply the career anchor model to individuals or within organisations there has to be an effective way of identifying and measuring them. This section begins by considering Schein's proposals relating to measurement. This includes an explanation of both qualitative and quantitative approaches. The later part of the section focuses on quantitative measurement using the Career Orientation Inventory (COI).

3.2.1 Schein's proposals

As mentioned above, in his original work Schein (1978) developed a semi structured interview process that could be used to help individuals determine their career anchor. The transcripts from these interviews provided Schein with qualitative data from which it was possible to identify patterns in decision making strategies. These patterns became the five original career anchors. A copy of the interview schedule can be found in Appendix 2. The questions centre on the interviewee's goals, first job, job transitions, feelings about those transitions and future goals. At the end of the interview the interviewees are asked to identify patterns or themes in their responses. This information is used to identify their primary career anchor. Evans (1996) suggests that it can take up to two and a half hours to complete the interview

process. This is practical for use in one to one career counselling but less so for use as part of an organisation's CPM. None of the published research into the career anchor model refers to the interview process. Instead it all focuses on the quantitative measurement of anchors using a questionnaire approach.

In collaboration with DeLong (1982), Schein developed the career orientations inventory (COI), a 48-item questionnaire designed to assess an individual's career anchor. The original version assessed the five initial anchors (GM, TF, AU, SE, CR) and three additional anchors proposed by DeLong (1982): Identity, Variety and Service. Each anchor was assessed using six questions. Two approaches were taken to the wording of the questions. Half the questions assessed the degree of importance of various career related factors to the respondent and were assessed using a four point Likert scale where one indicates, "of no importance" and four, "centrally important". The other half assessed the extent to which statements about careers were true to the respondent. These items were assessed using a four point Likert scale where one indicated, "not true" and four, "completely true". Through factor analysis four items were removed and the security anchor was split into two, geographical security and organisational stability. The questions from the original measure can be found in Appendix 3. Since then the COI has been refined and developed. Unfortunately the exact development and revision process is not published it is not possible to cannot comment on exactly how or why the measure changed. In Schein (1993) a 40-item version assessing the eight generally recognized career anchors can be found (GM, TF, AU, SE, SV, PC, CR, LS). This version contains five items to assess each anchor and these questions can be found in Appendix 4.

A review of the literature highlights the fact that numerous versions of the questionnaire are in existence and the level of empirical data supporting their composition varies. Essentially the COI is a psychometric instrument and as such should be objective, standardised, reliable and valid. A more detailed discussion of the methodology surrounding the properties and development of psychometric tests can be found in chapter 4 of this thesis. Some research has been conducted investigating the psychometric properties of the COI. This and other studies involving the career anchor model are reviewed in the following section.

3.2.3 Career anchor empirical structure

As discussed above, the evidence from Schein concerning the development and structure of the career anchor model is limited. Since the development of the model research conducted by others analysing the empirical structure underlying the career anchor model has been reported in various formats. Published research has used different statistical techniques to determine the number of career anchors measured by the COI and results vary from three to eleven (e.g. Custido, 2000, Ramakrishna, 2003, Tan & Quek, 2001). Different versions of the COI have been used to carry out these investigations making comparisons and generalisations difficult. This, inevitably, has led to criticism of the model and presented questions about its reliability and validity. The following paragraphs review and critique the existing research and demonstrate the need for further investigations. A summary of all the research studies considered in this section can be found in Table 3.5.

The most common starting point for researchers focusing on the career anchor model is to determine the latent variables being measured by the COI using factor analysis. DeLong (1982) describes his work as the “first to evaluate the career anchor model through a more empirical approach” (p. 60). DeLong (1982) derives nine factors from data, collected from an all male graduate sample from one university. Since this paper several other authors have conducted factor analysis on various data sets reporting a range of structures (see Table 3.5). Many of these investigations have been conducted on small samples, the smallest being 101. Field (2006) and Tabachnick and Fidell (2001) indicate that the sample size for factor analysis should be at least 300 for the technique to be appropriate. If the sample size is too small it increases the risk of error and thus has effects on the reliability of the results (Kline, 1993). Several of the studies outlined in Table 3.5 have smaller than adequate samples (Brindle & Whapham, 2003b; Custido, 2000; Igbaria & Baroudi, 1993; Jiang & Klein, 1999; Marshall & Bonner, 2003; Ramakrishna & Potosky, 2003) making their use of factor analysis inappropriate and their findings questionable.

With the exception of Danziger, Rachman-Moore & Valency (2008) all of the published factor analysis studies use homogenous samples making it difficult to generalise from this research. Schein's initial qualitative research and his work with DeLong (1982) used an all male, management sample. Several articles outlined in Table 3.5 are based in the information systems sector and as such the findings are restricted to those employees. Brindle and Whapham (2003b) use a sample of career

changers and most of the other research focuses on a specific profession. If research is conducted on samples from a small range of occupations the range is restricted. This could artificially reduce the range of scores from the COI and have an impact upon the latent variables measured (Tinsley, 2000). Danziger, Rachman-Moore and Valency (2008) were the first to use a large, varied sample (n=1847). Their sample is taken from student contacts from an MBA course and as such represents Israeli working adults from a wide variety of organisations. The authors comment that they believe the results to be transferable to a European sample. However, the fact that the COI was translated into Hebrew for this research may have an impact on the way in which the questions were interpreted, the results and the generalisability of their findings. Just one of the research studies published to date uses a UK based sample (Yarnall, 1998) despite the model being widely used here (Evans, 1996). This review of the literature highlights three problems with the factor analysis studies conducted to date:

1. small samples
2. restricted samples
3. non UK samples.

It is argued here that these problems need to be addressed before the model can be utilised in the management of careers in the UK.

Two studies have examined the reliability of the measure by considering internal consistency (Brindle & Whapham, 2003b) and test-retest reliability (DeLong, 1982). Reliability concerns the consistency with which a psychometric test measures a construct and is considered in detail in chapter 5 of this thesis. Reliability is an important component of a measure and the lack of research on the COI's reliability highlights another gap in the research on the model. The research presented in chapter 5 of this thesis considers reliability in detail, thus seeking to address this issue.

Another important component of psychometric tests is validity. In relation to the COI, validity is concerned with whether a test measures what it purports to measure. In the case of career anchors validity would assess how appropriate the COI is as a measure of the model. Validity can be measured in several ways and a full discussion is found in chapter 5. The normal starting point of validity research is to examine content validity defined as "the degree to which elements of an assessment

instrument are relevant to and representative of the targeted construct” (Haynes, Richard & Kubany, 1995, p.239). The content validity can also indicate the level of construct validity (Anastasi, 1982) and impact on the latent factor structure and any inferences that can be made from the model (Haynes, Richard & Kubany, 1995). Construct validity refers to the relationship between measures of similar and dissimilar psychological constructs (Westen & Rosenthal, 2003). As the constructs measured by the COI are hypothetical one way to determine whether the measure is actually measuring career anchors is to compare individuals’ scores on the COI to their scores on measures of similar constructs (Smith, 2005). Brindle and Whapham (2003b) used a sample of 187 career changers to examine the construct validity of the model by comparing COI scores to scores on Super’s Work Values Inventory. Super’s Work Values Inventory was devised in the early 1950s to measure the relative importance of fifteen work values to individuals (Carruthers, 1968). Examination of these values suggests that there should be some relationships with Schein’s career anchors. The results of their study are shown in Table 3.3 below. All the correlations above 0.25 were significant the ones in bold text are described by Brindle & Whapham (2003b) as conspicuously high. Examining Table 3.3 highlights areas of similarity that would be expected, such as a high correlation between Schein’s general management and Super’s managing others. Similarly, a high correlation between Schein’s autonomy and Super’s independence was found. Schein’s security correlates with Super’s and Schein’s sense of service with Super’s altruism and Schein’s lifestyle with Super’s way of life. These data provide some evidence for the construct validity of the COI.

Warr and Pearce (2004), investigated the link between career anchors, trait based personality and organisational culture (n=647). Personality was measured in this study using the Occupational Personality Questionnaire (OPQ). The OPQ has been designed to measure 30 aspects of an individual’s personality in a work context (Dulewicz, 1995). The authors did not use the COI to measure anchors but asked participants how important each of the anchors would be to them on a seven point scale from unimportant to essential using one question for each anchor.

Table 3.3 Correlations between Career Anchors and Super's Work Value scales from Brindle and Whapham (2003b)

From this only two factors emerged. The first was labelled Individual achievement, the second as Secure independence. The study showed that there was a “logical overlap” between these two factors and aspects of the OPQ. This suggests “uniquely” that there is some correlation between career anchors and personality again providing some support for the construct validity of the career anchor model but not for the COI. The review of the literature demonstrates that consideration of the validity of the COI has been largely ignored to date. Determining a psychometric measure's validity is a vital step in its development. The lack of validity research highlights another gap in the research literature that the studies reported here seek to address.

Some of the career anchor research has examined the distribution of career anchors across samples and considered demographic differences in anchors held. Chapter 2 of this thesis outlined the changes that have occurred in organisations and the way these changes have and continue to impact upon careers. These changes are likely to cause a shift in the way in which individuals view careers. This may in turn have an impact on the values they hold. This suggestion is supported by research into the values of different generations in the workplace. This suggests that different generations have different values due to their different life experiences (Zemke, Raines & Filipczak, 2000). Schein (1996) predicted that the career anchors held by individuals would change as a result of the changes occurring in the workplace. These predictions are summarised in Table 3.4. Some of these predictions relate to generational changes for example an increasing need for SV in young people. Others relate to more blanket changes for example increasing number of people with the LS anchor. Ramakrishna and Potosky (2001) found that the prevalence of the GM and TF anchors in samples of IS employees had decreased over a ten year period and prevalence of SE had increased. They suggest that this is an indication of people selecting themselves out of certain occupations rather than of people's career anchors actually changing, however from the research it is not possible to say this for certain.

Also in chapter 2, the ways in which the workforce is becoming more diverse were outlined. As a result, organisations are staffed by employees who have different views on careers, different career values and needs. The impact of both age and gender on careers was considered in the previous chapter and showed that there is evidence to suggest different genders and different ages may experience careers differently and hold different career values. Schein (1978) does not comment specifically on possible demographic differences in career anchors. This might be because his original studies focused on samples of male managers with similar demographic characteristics. However, some gender differences in career anchors have been reported. For example, women have been shown to exhibit greater orientation towards LS and men a greater orientation towards TF (Igbaria, Greenhaus & Parasuraman, 1991; Igbaria & Baroudi, 1993). As yet no studies have reported significant age differences in career anchors held or in any generational shifts in the career anchors held. With the increased diversity found in today's workplace a thorough examination of the distribution of career anchors across age and gender and an investigation into the prevalence of certain career anchors is needed to ensure organisations' CPM can be focused on what the majority of people

need. The lack of research on prevalence and demographic differences limits our knowledge of career values and this gap is partly addressed by the research presented in chapter 6.

Table 3.4 Schein's predictions for changes in the popularity of career anchors from Schein (1996)

The research on career anchors contains some reference to the notion of congruence, specifically the effects of career anchors on work related outcomes. As mentioned above Schein (1978) believed that congruence between career anchors and work environment was important and would ultimately lead to positive outcomes.

However, at the same time he stated that you could not tell an individual's career anchor from their job title (Schein, 1978). Conceptually this creates a complex relationship and methodologically this makes Schein's (1978) belief about the importance of congruence difficult to examine. If Schein believes that congruence is important and is related to both job satisfaction and organisational commitment (Schein, 1978) then there needs to be a way to measure congruence and compare individuals to their environment. Schein (1978) states that you cannot tell a person's anchor from their job title, suggesting perhaps that anchors and jobs cannot be matched and perhaps person job (PJ) fit is not the best approach to an examination of congruence. When discussing the congruence problem in relation to Holland's theory Arnold (2004) states that one problem with using job titles is that the same job can be very different in different organisations. Perhaps this idea can be carried over into career anchor congruence and maybe person-organisation (PO) fit is in fact the best way to conceptualise congruence. Alternatively, perhaps PJ fit could be considered but within just one organisation. If anchors could be matched to jobs and individuals occupying these jobs found to hold certain career anchors Ramakrishna and Potosky (2001) suggest this would be a result of self selection into and out of the job roles. The methodological issues associated with measuring congruence are discussed at length in chapter 4 of this thesis.

There are some published research articles that attempt to examine congruence and the career anchor model (Bester, Phil & Mouten, 2006; Danziger & Valency, 2006; Feldman & Bolino, 2000; Igbaria, Greenhaus & Parasuraman, 1991). Their findings are summarised in Table 3.5. Relationships have been found between congruence and job satisfaction, career satisfaction, organisational commitment and intention to leave. All of the studies examining congruence and career anchors have looked at PJ fit despite Schein's (1978) belief that anchors were not related to jobs. The studies to date have made assumptions about the career anchors that would be suited to particular roles rather than attempting to measure them in an objective way. For example, Bester, Phil and Mouten (2006) assumed that SV would be the dominant anchor for psychologists and judged fit on this alone. Igbaria, Greenhaus and Parasuraman (1991) examined congruence using just the GM and TF anchors. Fit was conceptualised by splitting IS jobs into providing for either the GM or TF anchors. They found employees who exhibited a match between job and career anchor had higher job and career satisfaction, higher organisational commitment and reduced intention to leave. Feldman and Bolino (2000) found differences in levels of job and life satisfaction, psychological well being, skill utilisation and intention to

remain self employed in those with different anchors and different levels of fit to the role of being self employed. These studies provide some empirical support for Schein's (1978) notion that congruence is important in relation to career anchors and that congruence is related to positive outcomes such as improved job satisfaction but they are limited in respect of their measurement approach (see chapter 4, section 4.3.4 for a discussion of congruence measurement). These studies also indicate that despite Schein's (1978) belief that career anchors could not be related to job roles that when congruence is measured in this way an impact on work related outcomes is seen. The methodological flaws associated with the studies examining congruence to date create a significant gap in the research literature concerning congruence and the career anchor model. This gap is addressed in the research presented in chapter 9 of this thesis.

Ramakrishna and Potosky (2001) indicate that there is a need for more research that considers the direct relationship between career anchors and outcomes. This is connected to the dispositional aspects of job satisfaction discussed in chapter 2, section 2.2.5.1. Igbaria and Baroudi (1993) examined the direct links between career anchors and outcomes. Their research used a short form measure of the COI and found a relationship between the TF career anchor and job and career satisfaction. In this study the sample used was homogeneous as it was taken from one profession. Therefore, it could be argued that the relationships found between career anchors and outcomes were actually a result of fit. The research presented here acknowledges that there could be direct effects of career anchors on outcomes and attempts to address this in chapter 9. In chapter 10 the possibility of any direct relationships actually being related to fit is discussed.

All of the previous congruence research conducted using the career anchor model focuses on direct effects of congruence on outcomes. Tinsley (2000) suggests that researchers need to adopt a more complex approach to the investigation of this relationship. One recommendation made is to consider the role of fit as a moderator. If a direct relationship can be found between career anchors and outcomes it may be that this relationship is moderated by career anchor congruence. For example, if scores on the subscales of the COI are shown to explain a proportion of variance in job satisfaction, the strength of this relationship may be moderated by career anchor congruence. Therefore the relationship between career anchor score and job satisfaction may be stronger if the individual exhibits a high degree of fit. This has not been considered in previous research but will be examined in chapter 9.

Similarly, in chapter 2 the possible impact of career salience on the relationship between congruence and outcomes was discussed. In summary, Arnold (2004) suggests that career salience or the importance of work may moderate this relationship. None of the career anchor congruence studies conducted to date have considered this relationship. This gap will be addressed in chapter 9.

Table 3.5 Summary of research done on the structure of the model to date

Study	n	Sample	COI used	FA method	No. factors	Internal Consistency	Other
DeLong (1982)	320	Male graduates from one US university	48 item		9 (TF, GM, AU, CR, identity, SV, variety, SE org, SE geo)	Not measured	Test re-test reliability (n=73) : 0.38-0.92
Igbaria, Greenhaus and Parasuraman (1991)	464	Association for Computing Machinery (ACM) members -US	41 item 5 point scale	Varimax	11 with eigen values of 1 or above accounting for 68.8% of the variance. Second order factoring reduced this to 8 (TF, GM, AU, SE, EC, SV, PC, LS)	0.72-0.91	ANOVA and chi square showed no significant differences in career anchors for marital status, age, education or tenure. MANCOVA showed employees who exhibited a match between job and anchor had higher job and career satisfaction, higher organisational commitment and reduced intention to leave.
Crepeau, et al. (1992)	321	IS personnel	41 item 6 point scale	PCA varimax	8 factors (TF, GM, AU, SV, identity, SV, variety, SE)	0.78-.084	
Igbaria and Baroudi (1993)	1: 198 2: 198	Members of Data processing management association -US	1: 41 item 5 point scale 2: 25 item short version 5 point scale	1: Varimax 2: CFA	11 with eigen values greater than 1. Second order factoring reduced this to 9 (TF, GM, AU, SV, EC, PC, LS, SE org, SE geo)	Study 1: 0.61-0.93 Study 2: 0.62 – 0.93	Developed short 25 item measure ANOVA showed women score higher on LS, men on GM and EC. Significant positive correlations found between job and career satisfaction and TF.

Study	n	Sample	COI used	FA method	No. factors	Internal Consistency	Other
Yarnall (1998)	374	UK Civil Aviation Authority	40 item version	N/A	N/A	N/A	Chi-square showed those in higher grades oriented towards GM, those in lower grade oriented towards SE.
Jiang and Klein (1999)	101	Entry level IS professionals - US	36 items 5 point scale	PCA, varimax	9 with eigen values greater than 1 (TF, GM, AU, SV, identity, SV, variety, SE, PC)	Not reported	No relationship found between career anchors and career satisfaction.
Custido (2000)	114	Academic Executives from the Philippines	41 item, 6 point response scale	PCA – varimax	2; (LS, SV, GM) and (AU, SE, CR, TF)	0.78-0.84	
Feldman and Bolino (2000)	153	National Association for the Self Employed (NASE) - US	Only items relating to EC, AU and SE	N/A	N/A	N/A	MANOVA showed significant differences in the motivations for being self employed depending on the dominant career anchor held. MANOVA showed significant differences in job and life satisfaction, psychological well being, skill utilisation and intention to remain self employed between those with different anchors.
Tan and Quek (2001)	162	Educators from Singapore	40 item	N/a	N/a	N/a	

Study	n	Sample	COI used	FA method	No. factors	Internal Consistency	Other
Bridle and Whapham (2003)	187	Career changers - UK		PCA	3 factors explaining 25% of variance; (EC, AU, PC, TF) (SE, LS) (GM, SV)	0.56-0.82	Demonstrate that removing the weighting process increases internal reliability from 0.37-.0.77 to 0.56-0.82. Construct validity examined through comparisons to Super's work values.
Marshall and Bonner (2003)	423	Graduate students, Australia	40 item, 6 point scale	EFA	9 (GM,TF, AU, SV, PC, LS, SE, Creativity, Entrepreneurial)	N/a	Correlations found between age and AU, SE and SV. Regression analysis found gender to be a predictor of GM, EC and PC.
Ramakrishna and Potosky (2003)	163	IS professionals from one organisation - US	41 item, 5 point scale	PCS, varimax	9 using latent root criteria (TF, GM, AU, SV, EC, PC, LS, SE org, SE geo)	Not reported	54% one anchor, 37% two anchors, 7 % three anchors, 2 % four anchors Hypothesised that > 1 dominant anchor would dilute relationship with outcomes (Job satisfaction, self rated job performance, supervisor rated job performance). Correlation analysis showed no significant relationships, ANCOVA showed no significant differences.

Study	n	Sample	COI used	FA method	No. factors	Internal Consistency	Other
Bester, Phil and Mouten (2006)	75	South African Psychologists	41 item 10 point scale	N/a	N/a	N/a	Found psychologists with SV as dominant anchor to have higher job involvement, no significant differences found in job satisfaction.
Danziger and Valency (2006)	1847	Israeli working adults	40 item	N/a	N/a	N/a	Found differences in the anchors held by salaried and self-employed participants. Gender differences found, including higher proportion of women with lifestyle anchor. Higher levels of job satisfaction found in participants who demonstrated congruence between job and career anchor.
Danziger, Rachman-Moore and Valency (2008)	1847	Israeli working adults	40 item	CFA	9 factors (TF, GM, AU, SE, SV, LS, PC, Entrepreneurship, Creativity)	0.60-0.88	

3.3 Chapter Summary and Research Hypotheses

This chapter has introduced the career anchor model, outlined the research conducted on the model to date, identified a number of gaps in this research and set the scene for the studies that follow in this thesis. The final section of this chapter aims to summarise this information and provide details of the studies that are presented in this thesis and the specific hypotheses they address.

3.3.1 Empirical Assessment of the COI

The subtle inconsistencies in the versions of the COI used and the problems with sample size and range reported above could be said to weaken the reported psychometric properties of the COI. To date no research has been conducted on a large, heterogeneous UK sample to assess the psychometric properties of the COI despite the fact that the model is widely used here (Evans, 1996). Similarly there is a lack of research that considers the reliability of the COI as a measure of career anchors. The study reported in chapter 5 aims to address this gap by testing the following hypotheses:

H5.1: The COI is a suitable measure of the career anchors proposed by Schein.

H5.2: The COI exhibits acceptable reliability levels to warrant its description within this thesis as a psychometric test.

As discussed above Schein proposed that once developed, as a result of work experience, career anchors would remain relatively stable throughout an individuals working life. However, he also recognised that significant life or work changes in rare cases may lead to changes in the career anchors held by an individual. Evidence for or against this hypothesis is lacking. The increased rate of change in the workplace described in chapter 2 makes it even more important to understand how and why career anchors might be affected by changes. Data presented in chapter 5 aim to examine this by testing the following hypothesis:

H5.3: The career anchors measured by the COI may change more with extreme life or work experiences than without them.

The lack of validity data from previous research reduces the status of the COI as a thoroughly developed psychometric instrument. The data presented in chapter 5 examine the face and construct validity of the COI and addresses the following hypothesis.

H5.4: The COI will demonstrate an acceptable level of face and construct validity.

The data presented in chapter 9 provide an opportunity to consider the criterion validity of the COI.

3.3.2 Distribution of career anchors

As discussed the original work conducted by Schein (1978) was carried out with an all male sample from one university. Since then other researchers have examined career anchors with various different samples, most of which have been homogenous in their make up. Chapter 2 describes the changes in the way in which the career concept is defined and the way these changes have impacted upon the values people have concerning their careers. Schein (1996) made a number of predictions concerning the changes in the prevalence of career anchors (see Table 3.4) but as yet these have not been empirically examined. These predictions are examined in chapter 6 specifically in relation to the following hypothesis:

H6.1: The prevalence of career anchors within the current sample will be different to that found by Schein in his original study. Typically it is expected that there will be an increase in numbers of people with LS and AU career anchors as predicted by Schein (1996).

The role of age and gender in shaping our careers and our career values is discussed in chapter 2. Evidence suggests that career values differ between men and women and across the lifespan. The increasingly diverse make up of the working population means that understanding and conceptualising these differences is becoming increasingly important and has direct implications for organisations' CPM systems. Some research has been conducted examining gender differences in the career anchors held by individuals but to date this research has been conducted with homogenous samples. As the research literature suggests that gender differences do exist in career values if they can be found when using the COI as a measure this contributes to the validity of the measure. As such the following

hypotheses will be examined in chapter 6 using a broad sample of UK based employees:

H6.2: There will be significant differences between men and women in their scores on each of the career anchors as measured by the COI. More specifically the literature suggests that women will score higher on the LS career anchor and men on the PC, AU, GM career anchors.

H6.3: There will be significant differences between age groups in scores on each of the career anchors as measured by the COI. Typically, the literature suggests that younger age groups will score higher on the LS and SV career anchors and the older age groups will score higher on the GM and AU career anchors.

3.3.3 Matching Career Anchors to Jobs

Schein (1978) stated that you could not tell a person's career anchors from the job they do. However he also stressed the importance of congruence as a component of the career anchor model but the evidence examining this is extremely limited. As discussed above, to enable empirical examination of congruence some mechanism must be made that enables career anchors to be matched to some element of the work environment. Other researchers have tried to examine congruence operationalised as PJ fit by assuming which career anchors are matched to certain jobs. Methodologically this approach is flawed. To address this issue the research presented in chapter 8 aims to find an objective approach to the matching of career anchors to jobs within one organisation. The jobs considered in this study are non-management level thus also addressing the issue concerning career anchors' applicability to these roles. This research addresses the following hypotheses:

H8.1: A commensurate measure of job anchor characteristics can be developed from the COI.

H8.2 Career anchors can be matched to job roles within the host organisation and different jobs will have different career anchor profiles.

3.3.4 Congruence Studies

Building on the research presented in chapter 8 which aims to match career anchors to jobs, the research in chapter 9 aims to use these data to thoroughly examine the role of congruence and the career anchor model. As mentioned above some researchers have attempted this by making assumptions about the matching process. Similarly these matches have been made based on the primary anchor only thus missing out on the potential of matching the whole profiles. Tranberg Slane and Ekeberg (1993) note this as a flaw of the congruence research with the RIASEC model. The methodological complexities involved in congruence research are discussed in full in chapter 4 section 4.3.4. The research presented in chapter 9 aims to add to the career anchor literature by examining congruence scientifically by using two approaches to congruence measurement and considering the role of moderators in the relationship between congruence and outcomes. In chapter 9 the following hypotheses are addressed:

H9.1 Demographics will explain a significant proportion of the variance in a) job satisfaction and b) organisational commitment

H9.2 Career anchor congruence will explain a significant proportion of the variance in a) job satisfaction and b) organisational commitment.

H9.3 Career anchors will explain a significant proportion of the variance in a) job satisfaction and b) organisational commitment.

H9.4: Congruence will moderate the relationship between career anchors and a) job satisfaction and b) organisational commitment.

H9.5: Career salience will moderate the relationship between congruence and a) job satisfaction and b) organisational commitment.

Chapter 4

Methodological Background

4.1 Research in Occupational Psychology

The research presented in this thesis has been undertaken from the perspective of occupational psychology. This chapter outlines the main methodological considerations that underpin this research. The first section briefly outlines the two major research approaches within this discipline, qualitative and quantitative. The studies presented in this thesis take a quantitative approach and the reasons for this are discussed here. One of the criticisms faced by occupational psychology research has been its limited relevance to practitioners. This theory and practice divide is also explored briefly here and the research presented is positioned in relation to this. Next, as chapter 5 of this thesis presents an analysis of the psychometric properties of the COI the theory of psychometrics is considered. Finally, in relation to chapters 8 and 9 of this thesis, the remainder of this chapter concentrates on congruence and the methodological issues associated with its measurement.

4.1.1 Quantitative vs. Qualitative

Within psychology two main schools of thought exist relating to research methods, qualitative and quantitative. These two approaches have emerged from two opposed epistemological positions, interpretive and positivist. The traditional school of thought in psychology has been positivist. Researchers from this perspective believe in universal laws of cause and effect that can be examined in a scientific way using quantitative methods. The hypothetico-deductive method is used in positivist research. This means research questions are generated from pre-existing literature and are then tested using statistical techniques. Hypotheses are either accepted or rejected based on the statistical results. This approach aims to be objective and scientific by controlling variables, establishing statistical significance and developing universal laws through the generalisation of findings. The focus of quantitative research tends to be on factors such as reliability, validity, consistency, replicability, and minimisation of errors. The researcher in such studies is thought to remain objective and neutral and as such does not impact upon the phenomena being investigated (Arnold, 2004). Research in occupational psychology is strongly embedded in the positivist paradigm (Johnson & Cassell, 2001). Many occupational psychologists believe that human behaviour is measurable and certain constructs exist within individuals and are relatively enduring (Johnson & Cassell, 2001).

In contrast the interpretive approach has been born out of critique of the positivist method. This methodological approach aims to interpret reality through the eyes of the individual participant (Silverman, 1977). Theory is generated from the data rather than theory driving data collection as in the positivist approach. Qualitative researchers focus on data in the form of text rather than numbers, for example interview transcripts. From this they aim to interpret meanings whilst recognising the shared subjectivity that exists between the researcher and researched.

Rather than seeing these two approaches to research as distinct it is becoming more common to see researchers recognising both. Some take what is termed a mixed methodological approach to their research by combining both qualitative and quantitative methods within the same study. Johnson and Cassell (2001) note that qualitative data can be used in positivist research either before, to inform the quantitative stage or after, to further explain the findings of quantitative studies. However this often results in a neo positivist approach rather than something more post structural. Despite the attempts of many to incorporate qualitative methods into their research the fact remains that currently the majority of research conducted within the discipline of occupational psychology takes a positivist approach with a realist ontology (Arnold, 2004).

All of the research reported in this thesis takes a positivist approach. Hypotheses were generated from the literature a priori and the researcher then tested these hypotheses. The researchers position was deemed to be neutral and aspects of the individual were deemed to be measurable constructs. This approach was deemed to be the most suitable for the research conducted here to enable empirical analysis of the psychometric properties of the COI, analysis of the prevalence of career anchors and an examination of congruence. The limitations of the methodology employed and consideration of how qualitative data could have added depth to some parts of the study are considered in chapter 10.

4.1.2 Bridging the gap – theory and practice

Occupational psychology is an applied psychological discipline. It takes the mainstream psychological theories and applies them to the world of work. Occupational psychologists “help an organisation to get the best from its workforce and improve the job satisfaction of the individual. By applying psychological expertise, they work to increase the organisation’s effectiveness and improve the

career development of employees” BPS (accessed 6th Feb 2009). Anderson, Herriot and Hodgkinson (2001) describe the high level of synergy between research and practice within occupational psychology as one of the defining features of the discipline. However, within the occupational psychology community there has been an increased focus on what has been termed the “academic-practitioner divide” (Arnold, 2004, p.2). Practitioners feel that much of the academic research is “abstract and inconsequential” (Gelade, 2006 p.153), thus failing to consider practical issues. Academics argue that practice should be based on theory and practitioners should work harder to access the research literature to guide their work, rather than accepting clients’ “often blinkered definitions of problems” (Arnold, 2004, p.2).

In an attempt to overcome some of these issues Anderson et al. (2001) propose a fourfold typology of research shown in Figure 4.1. These authors believe there has been a movement towards pedantic and popularist science causing a dumbing down of research. Their typology was adapted and extended by Arnold (2004), these adaptations are highlighted in red in Figure 4.1.

Figure 4.1 Typology of research approaches in occupational psychology

		Theoretical/Conceptual Content			
		High		Low	
		Methodological Rigour			
		High	Low	High	Low
Practical Relevance	High	Potent	Prescient	Pragmatic	Popularist
	Low	Proficient	Pompous	Pedantic	Puerile

For publication in the Journal of Occupational Psychology (JOOP) research should be high on at least two of the criteria (practical relevance, methodological rigour or theoretical/conceptual content). By definition it should be potent, prescient, pragmatic or proficient (highlighted in bold in Figure 4.1) (Arnold, 2004).

Another contributing factor to this divide is the perceived failure of academics to thoroughly address the implications of their research. A review of the studies published in JOOP in 2004 demonstrated that half did not mention any practical implications of the research conducted (Gelade, 2006). The research presented here aims to be proficient by demonstrating high methodological rigour and high

theoretical content in the examination of the psychometric properties of the COI (chapter 5) and developing a method for matching career anchors to jobs (chapter 8). At the same time it is potent by demonstrating high methodological rigour and high theoretical content and at the same time ensuring practical relevance in the consideration of career anchor prevalence (chapter 6) and congruence (chapter 9). Chapter 10 of this thesis contains sections on the contributions this research has made both to the academic literature on career anchors and the implications the findings have for practitioners. The remainder of this chapter provides more methodological details about each of the main studies. Section 4.2 concentrates on the research reported in chapters 5 and 6 and section 4.3 focuses on the methodological issues relating to the research reported in chapters 8 and 9.

4.2 Psychometric analysis of the COI

Chapter 5 presents an empirical analysis of the COI as a measure of the career anchor model proposed by Schein (1993). As explained in chapter 3, past research outlining the development of the COI is not available which causes some problems in trying to analyse the measure's psychometric properties. Chapter 3 also outlines the previous research investigating the factor structure of the anchors measured by the COI and demonstrates the variability in results (from three to eleven factors). One of the reasons for this is the variety of versions of the COI that have been used in this research. The variations in the COI mean that different anchors are measured, some include the identity and variety anchors no longer generally recognised by Schein (1993) and the number of items varies between 40 and 41. The questionnaire used for the research presented here is the version used by Igbaria and Baroudi (1993). This measure was adapted with permission to ensure that the measure contained 40 questions designed to measure the anchors as proposed by Schein (1993). The full version of the questionnaire can be found in Appendix 5.

4.2.1 Psychometric Theory

Psychometrics is a sub-discipline of the social sciences; specifically it centres on the techniques involved in measuring psychological constructs (DeVellis, 1991). These constructs have been defined as "an idea or concept, carefully developed (or constructed) in an informed imagination" (Guion, 2004, p.56) For the career orientations inventory (COI) to be called a psychometric instrument it must exhibit certain properties, including reliability and validity. Nunnally (1978) suggests that

measuring, as defined by psychometrics, means developing rules that enable us to assign numbers to objects and represent quantities of attributes. To be called a psychometric a measure must also be standardised, meaning that the administration process has been fixed enabling scores collected at different times and from different places to be compared (Cronbach, 1984). The process of standardising a test also includes a consideration of reliability and validity and ensures that these are maximised (Freeman, 1962). These concepts are considered in detail in chapter 5.

Classical test theory states that all psychometrics contain an element of error and as such an individual's true score comprises of their observed score (or raw score) plus errors of measurement (Bartram, 1990). This element of error should be minimised through the rigorous statistical procedures applied in the development of the measure. As discussed in chapter 3 the published information regarding the development of the COI is limited. Therefore, the investigation proposed here is still unable to examine the choice of questions in the COI at an item analysis level. This means that any subsequent analysis of the psychometric properties of the COI will not be able to consider this stage.

The format of the questions included in a psychometric varies and as a result so do the response formats. Responses to questions in a psychometric test can take the form of judgements, where there is a definite right or wrong or alternatively, responses can take the form of sentiments, where answers are expressed as interests, attitudes or values (Nunnally, 1978) such as in the COI. The type of questions and their response styles depend on the construct being measured. The response scale for items in the test also varies widely. Nunnally (1978) suggests that graphical scales with numbers and verbal labels are the clearest to use and help to eliminate measurement error. This is the response format used for the version of the COI employed in the research presented in this thesis. Other response scales can cause ambiguity resulting in confusion for the participants and the potential for biased or inaccurate results to be reported.

To identify an individual's primary anchor from the scores generated by the COI Schein (1993) suggests that a weighting process is used. This process involves identifying the most important items and adding points on to those answers. Brindle and Whapham (2003a) show that this weighting process significantly reduces the reliability of the COI. Therefore this process will not be used in the research presented here. An alternative approach is to present the anchors in an ordinal

format based on raw scores to demonstrate to the individual the anchor that is highest scoring for them. However, as Nunnally (1978) points out using raw scores to do this means there is no indication of how much of an anchor an individual possesses or relatively how far apart the scores on each anchor are. The interpretation of interest scales traditionally compares a person's score on each scale to determine what it is they like the most (Cronbach, 1984) and this approach is taken here in the consideration of content validity, described in chapter 5. Another approach to interpretation of raw scores from psychometric instruments is to use norm tables to allow cross-person comparisons. This approach is extremely popular with many psychometrics and most popular instruments have a wide variety of norm tables available to enable appropriate comparisons to be made. However, Cronbach (1984) suggests there is little value in taking this approach with interest inventories. He states, "there is little point in telling a student that (for example) many people have a greater interest in science than he does (Cronbach, 1984, p.80)". If, however norms are used with interest inventories they are normally within-sex norms (Cronbach, 1984) reflecting the gender differences in vocational choice. The COI does not use norm tables. Instead, as discussed previously, Schein suggests the use of a weighting process to identify the individual's primary career anchor. This is then used as the basis for guiding career decisions.

Like most psychometrics the COI is a self-report measure meaning that individuals are rating themselves and as such carries with it certain methodological problems. As Podsakoff and Organ (1986) point out, self report measures are often not verifiable by other means. It is not possible to cross validate the findings of self report measures as they often relate to feelings or intentions. They go on to suggest that severe problems can occur when self report measures of personality or interest data are correlated with the same persons self report on measures of psychological states such as job attitudes. This is called the problem of common method variance. This approach forms the basis of much of the congruence research, which is considered later on in this chapter and again in chapter 10.

4.2.2 Career Anchor Distribution

Chapter 6 examines the distribution of career anchors from a broad sample of UK based employees and considers the role of demographic differences among them. In his original research Schein (1978) found approximately 25% of the sample were anchored in general management, 25% in functional expertise, 10% in autonomy, 10% in security and the remainder spread evenly among the remaining anchors. It is

to be remembered when considering these percentages that the original sample consisted of all male management course graduates, so it cannot be said that these percentages are representative of the general population. In 1996 Schein hypothesised that the career anchors held by individuals were likely to have changed from his original research. A full consideration of these predictions is made in chapter 6.

4.3 Examination of the role of congruence

The data gathered for the research presented in chapters 8 and 9 of this thesis included in this thesis were collected from one organisation, a UK police service. Much of the research conducted in the area of occupational psychology requires the co-operation of one or more organisations. Chapter 7 of this thesis provides a thorough description of the nature of the police service organisation used in this research. Conducting research with an organisation brings with it both benefits and challenges. These issues and their relationship to the research presented in chapters 8 and 9 are considered first in this section. Secondly the role of career anchors within organisations is discussed briefly as this relates to the implications of this research for practice discussed fully in chapter 10. Finally the issues related to the measurement of congruence are considered.

4.3.1 Research within organisations

When conducting research with an organisation a number of factors must be considered. It must be remembered that in these cases there are two parties, often with differing needs, those of the researcher and those of the organisation. Rynes and McNatt (2001) believe that there is considerable scepticism in organisations about letting academics through their doors. As a result the first priority of the researcher centres on establishing agreement with the organisation about research objectives, process and outcomes. Neglect of this stage is likely to lead to problems for both parties at a later stage. In terms of this study, a contract between researcher and organisation was drawn up before the research commenced. At the start of the research, time was spent discussing the project in great detail with key stakeholders of the organisation to decide what input they would have, establish their expectations and decide how the research would go ahead.

Stone-Romero (2004) points out that researchers need to consider issues relating to experimental design and generalisability of results when working in the field (e.g.

within an organisation) as opposed to working in a laboratory setting. Field based research means that the researcher has less control over variables and as a result it can be more difficult to make strong conclusions from the results found. Similarly if research is conducted within just one organisation, researchers must be cautious about any statements made about the generalisability of the results found. These issues are considered in detail within chapter 10 of this thesis.

Any research project needs to give consideration to ethics. This is particularly prevalent in organisational research due to the possibility of two ethical codes being in existence, that of the researcher and that of the organisation (Mirvis & Seashoe, 1979). Aguinis and Henle (2004) describe two approaches to ethics, the utilitarian perspective and the deontological approach. The utilitarian perspective uses a cost benefit analysis to determine if a course of proposed research is ethical. Benefits considered include benefits to the participants, to society and the contribution the research makes to science and knowledge. If these benefits outweigh the potential costs such as deceit or stress to participants then the research is deemed ethical. In contrast the deontological approach is much stricter, this approach says that researchers should adhere to the “universal roles of moral behaviour” (p.35). Thus, using this approach any research involving deception of participants would be deemed as unethical, regardless of the potential benefits of that research. The American Psychological Association (APA) and British Psychological Society (BPS) ethical guidelines are based on the utilitarian approach and as such this is the approach adhered to in the design of this research. The BPS Code of ethics and conduct states that psychologists should consider a number of factors before embarking upon a research project. Those deemed most relevant to the studies proposed here are discussed.

- 1) *standard of privacy and confidentiality* – all participants were assured confidentiality in both studies. No names were mentioned in any of the final write-ups and the numbers involved in all stages of this research meant that no one individual was identifiable from the results presented. The raw data were seen only by the researcher. Some career anchor profiles were given to line managers but only after the participant had viewed them and agreed to this taking place. All data were stored securely and any data files with participant names were password protected.
- 2) *standard of informed consent* – no deception was used at any stage of this research. All participants were made aware of the purpose and funding

arrangements at all data collection points. Most of the data collected for this research were via an online survey therefore behavioural consent is assumed. The survey contained contact details for the researcher so that any participants with concerns could discuss these directly with the researcher.

- 3) *standard of avoiding exploitation and conflicts of interest* – the co-sponsoring organisation were experienced at sponsoring research and as such made no unreasonable demands on the researcher regarding access to data. The majority of data gathered were survey based. Therefore it is felt by the current author that this provided an appropriate platform for participants to record their true feelings anonymously.
- 4) *right to withdraw* – as stated above the majority of the data collected for this research were via an online survey. The instructions of this survey contained information about the right to withdraw from the study. The data collection from within the host organisation was done via line managers and trade union representatives. The researcher discussed the issue of participation in the study with these managers and representatives to ensure no pressure would be put on employees to participate.

Research participation can become an issue when working within an organisation. For ethical reasons, as described above, it is important that participants do not feel that they have to take part in research as this is likely to have an impact on the results found. Similarly the scene setting for any phase of research activity within an organisation needs to be carefully considered ensuring issues of confidentiality and anonymity are dealt with to prevent any bias in results. Research within organisations can take longer to complete than laboratory based research because of the changing priorities of that organisation. Often research can be low on the employee's list of priorities (Anderson et al., 2001). This fact had a real impact upon the research presented in this thesis. Rogelbery & Brooks-Laber (2004) discuss the importance of nurturing participants, as organisational research participation rates are on the decline. As a result researchers should view participants as a "finite and depletable resource" (p.480). The initial research proposed and agreed was quite different to that presented here due to lack of participation from individuals within the organisation. This resulted in a number of false starts in the research process.

The Head of Training and Development from the sponsoring organisation initiated the research but was seconded to the Home Office for a period of 18 months shortly after the project began. At this point the person made responsible for requesting that

departments co-operate with the researcher was an individual with limited management responsibility. This may have created some resistance from other heads of departments in agreeing that their units would participate in the research.

Another major factor that had an impact on the rate of participation was the discussions taking place at the time concerning regionalisation of UK police forces. The Home Secretary at the time, the Rt. Hon. Charles Clarke put forward a proposal to create 12 regional “super” police forces (Fuller, 2006). This caused a great deal of concern over job security and at a meeting attended by the researcher of force personnel managers it was stated that “now is not the time to be talking to people about careers”. Bryman (1988) suggests that for academics conducting research within organisational settings these issues are not uncommon.

Despite these issues the present researcher spent time renegotiating this research with the host organisation and an acceptable solution for both parties was reached that enabled the research to proceed.

4.3.2 Career anchors in organisations

Schein believed that career anchors did have an important role to play in career management in organisations, suggesting that it was important for organisations to understand the model and that individuals with different anchors would require different psychological contracts and reward patterns (Schein, 1978). Evans (1996) explains that career anchors have been used extensively in practice in the UK. However, there is limited published research concerning the effectiveness of the application of the career anchor model within organisations or reporting on the way in which they have been applied. Arnold (1997) hypothesizes that “Perhaps the best use of career anchors is rather similar to Super’s Adult Career Concerns inventory – to conduct a survey of staff needs and preferences” (p.142). To use the information gathered from the COI more effectively, the role of congruence needs to be explained in more detail. This would allow the benefits of utilising this type of career anchor survey data to be explained more forcefully to organisations and in relation to performance outcomes. If it could be established that certain jobs are more suited to certain career anchors and if these two variables are matched a positive effect can be seen on work related outcomes. Then it would become easier to persuade managers of the benefits of applying the career anchor model within their organisations.

4.3.3 Congruence, careers and career anchors

The concept of congruence has been widely discussed in the literature in many forms. Tinsley (2000) describes how Plato first introduced the concept in *The Republic*, in which Plato argued for the need to assign people to jobs suited to their temperaments and abilities. More commonly the introduction of the concept is attributed to Parsons (1909) who posited the idea of matching people to occupations. This was then developed into more sophisticated selection systems employed for example in the two world wars in the 20th century. As discussed in chapter 2 the concept of matching individuals to jobs, organisations or work environments is the central basis of vocational counselling (Tranberg, Slane & Ekeberg, 1993) and is often referred to as fit. The purpose of discussing congruence or fit is its hypothesised link to positive work outcomes, Tinsley (2000) suggests that person environment fit is an important moderator of outcomes and central to vocational counselling and organisational management. Two main forms of fit are discussed; person job (PJ) defined as “the fit between the abilities of a person and the demands of the job or the desires of a person and the attributes of the job” Kristof (1996 p.2), and person organisation (PO) fit defined as “the compatibility between individuals and organisations” Kristof (1996, p.2). Bretz, Rynes & Gehart (1993), discuss the shift in focus from PJ fit to PO fit. The rationale for this is the greater long term benefits that can be gained from matching employees to broader organisational characteristics. Despite this both PJ and PO fit are considered here. It is felt that PJ and PO fit are distinct concepts and that it is possible to have good PJ fit without having good PO fit and vice versa. O'Reilly & Chatman (1991) found no significant correlations between PJ and PO fit, supporting their treatment as two separate concepts. Cable and Edwards (2004) explain that the fit paradigm posits that attitudes and behaviours result from the amount of congruence that exists between the person and their environment. The characteristics of the person involved in this fit relationship may include; values, goals, personality, ability and needs and the characteristics of the environment could include; rewards, organisational values, environmental conditions and physical or psychological demands.

Two main approaches to examining fit relationships are discussed by Cable and Edwards (2004): complementary fit, where the characteristics of either the person or the environment provide what the other wants and supplementary fit where the characteristics of the individuals and the environment are similar. Complementary fit studies are associated with psychological needs fulfilment and supplementary fit

studies focus on value congruence. Cable and Edwards' (2004) study shows that both complementary and supplementary fit contribute independently to work related outcomes but the concepts are interrelated. The research presented in chapter 9 focused on value congruence and therefore is a study of supplementary fit.

The concept of congruence is regularly associated with career theory. The literature is dominated with research on PJ fit in relation to Holland's model of vocational personality. This research is based on values congruence, wanting the values of the individual and the job or environment to be similar.

The relationship between career anchors and congruence is not as widely researched despite it being a large component of the model as discussed by Schein (1978). Schein (1978) describes at length the connection between individual and organisational components and how congruence between these components leads to optimal outcomes. However he does not see the relationship as that simple instead saying:

"If the matching processes work optimally, both the organisation and the individual will benefit – increased productivity levels, creativity and long range effectiveness for the organisation and job satisfaction, security, optimal personal development and optimal integration of work and family for the individual. As we will see the word 'optimal' is important because 1) people vary in the degree to which they need to be career or work involved; 2) these needs change with stages of family and life development and 3) these needs vary with the particular content of the work being pursued" (p.5).

These are important caveats when discussing the role of congruence with career anchors and are considered in the proposed model for this study. The stability of career anchors is examined in chapter 5. Schein (1978) refers to 'careers within careers'. By this he simply means that not all accountants are the same, not all teachers are the same and so on. So unlike in Holland's model, where vocational personality is matched to occupations using a three letter code, with career anchors it is not as simple as matching individuals career anchors to a job title or profession. Other factors also need to be taken into consideration such as the organisational culture, the location, and the hours of the job. It is hypothesised here that individuals' career anchors can be matched to jobs that take place in the same environment (or organisation) as the jobs have the same facets. This is the basis of the research

presented in chapter 8. The role of importance of work on congruence is considered in chapter 9 and operationalised as career salience.

4.3.4 Measuring congruence

The summary of the research conducted on career anchors and congruence presented in chapter 3 highlights some of the issues surrounding the measurement of congruence or fit. Assouline and Meir (1987) in their review of congruence and measures of well being describe 16 different approaches to measuring fit using Holland's model. These measurement issues make it difficult to compare studies and generalise the findings of any congruence research, this is one of the main criticisms. The studies described in this thesis attempt to investigate the role of PJ and PO fit in relation to career anchors. Specifically the effect of fit on job satisfaction and organisational commitment is examined. This section reviews a selection of the literature on congruence measurement and outlines the process that was selected for this research.

As Kristof-Brown and Jansen (2007) explain, there are several decisions a researcher needs to make before deciding which approach to measuring fit they are going to take. Firstly the context of the fit measurement needs to be determined. For example will the measurement be related to personality, values, goals or something else? The research in chapter 9 looks at values. The second decision suggested by Kristof-Brown and Jansen (2007) concerns the way fit will be approached, complementary or supplementary. As stated previously, supplementary fit exists when the individual and their environment have similar characteristics. This is usually operationalised through value congruence (Cable & Edwards, 2004; Edwards & Shipp, 2007). In contrast as discussed above, complementary fit is said to be present if the weaknesses or needs of the environment are fulfilled by the individual or vice versa (Edwards & Shipp, 2007, Edwards, 2008). For example an individual may have a particular skill that is required by an organisation. Alternatively an organisation may offer a specific reward that is required by an individual. Cable and Edwards (2004) explain that complementary fit research is generally operationalised as psychological need fulfilment. Their research finds that there are some similarities between both approaches to fit but that they also contribute independently to outcomes. The studies in chapter 9 of this thesis use supplementary fit.

Thirdly, the measurement approach must be decided. It can be direct (subjective) or indirect (objective). Direct measurement of fit is always at the individual level as a

single person measures both individual and environment. No consideration of making an actual measure of the environment is made. Cable and Edwards (2004) suggest that these direct measures of fit show the strongest relationships with outcome variables. Despite this, direct measures of fit have been heavily criticised as being subject to bias and halo effects. Direct measurement often relies on asking the individual about their perceived level of fit. Alternatively, organisational commitment could be taken as a direct measurement of fit (Kammeyer-Mueller, 2007). Indirect or objective measurement of fit could be described as a more scientific approach. It uses difference scores calculated between some aspect of an individual and an aspect of the environment. Objective fit normally takes a commensurate approach to measurement of the individual and environment. Kammeyer-Mueller (2007) suggests that objective fit is likely to be a significant predictor of subjective fit. Both approaches to the measurement of fit are examined in chapter 9 of this thesis.

The fourth step is to decide on the level of analysis to be undertaken: individual, job, team, organisational, environment, a combination of these levels or something different. The research in chapter 9 uses job and organisation as the level of analysis. Finally the exact method of analysis should be determined, normally difference scores or polynomial regression. Congruence or fit relationships are difficult to isolate as they can be affected by numerous other variables such as age, gender, career salience and career stage. All of these variables must be considered in the design of fit research. Age, gender and career salience are all considered in the regression analyses presented in chapter 9.

Much of the fit literature examines the direct effect of fit on outcome variables. However, Tokar, Fischer and Subich (1998) call for researchers to employ a more sophisticated methodological approach by considering the role of potential moderating variables. Moderators affect the strength and/or the direction of the relationship between the predictor and the outcome variable (Baron & Kenny, 1986). Moyle (1995) describes how the moderating variable causes a gradual change in the effect of the IV on the DV as its value changes. Tinsley (2000) recommends that researchers examine both the direct effects of fit and the role of fit as a moderator, this is the approach taken in the analyses reported in chapter 9.

Tinsley (2000) also discusses the need for commensurate measurement of individual and environmental characteristics in the investigation of person environment (PE) fit.

Commensurate measurement involves examining each variable on the same dimension. This measurement approach would argue that measuring desired and actual salary could only predict pay satisfaction not general satisfaction that is measured on a different dimension. Edwards and Shipp (2007) extend this definition by saying that commensurate measurement has two key features. The first they term 'nominal equivalence' (p.216) meaning the individual and environment are described in the same terms. The second is 'scale equivalence' meaning that both are assessed using the same scale. A commensurate approach to measurement is used in the analysis of objective fit described in chapter 9.

Specifically, a profile similarity index (PSI) based on nominal equivalence is used as a measure of person job fit. Edwards (1993) explains that "PSIs combine two sets of measures, or profiles, representing corresponding entities (e.g., the person and organisation, supervisor and subordinate, organisational strategy and environment) into a single score intended to represent their overall congruence" (p.641). The use of PSIs is very common in congruence research but it is not without criticism. The main criticisms of this approach have come from Edwards (1993, 1994), these centre on four main issues. The first of these relates to conceptual ambiguity caused by combining different dimensions into an overall profile. The second issues relates to the discarding of directional information, with PSIs an equal over or under match are considered to be the same. Thirdly the PSI does not take into account the source of the differences, so two individuals can have the same fit score but one may differ a small amount on all elements of the profile (all anchors) and the other may differ greatly on just one element (anchor). The fourth issue described by Edwards (1993,1994) concerns the methodological approach. Edwards and Van Harrison (1993) review a number of different approaches ranging from measuring the direct effects of a person or a job on outcomes, using the difference score (or fit measurement) alone to predict the outcome, and using either the person or the job or the fit measure as a moderator. Edwards (1993) is mostly concerned where the measurement of fit is used alone. To overcome these issues Edwards and Parry (1993) discuss the benefits of using polynomial regression which allows the three dimensional relationship between variables to be considered whilst maintaining the person and job as separate constructs. However, they also acknowledge that polynomial regression equations are both difficult to interpret and intensive to calculate. Hesketh (1993) also recognises the importance of considering the person and job as separate constructs but suggests that this can be done using hierarchical regression analysis by entering the variables separately and then

considering any additional effects that are due to fit. This is the approach taken in part of the analysis reported in chapter 9. Tisak and Smith (1994a) argue that whilst there are methodological issues concerning the use of PSIs these are not sufficient to abandon this approach all together. They state that they believe that PSIs do represent something that is conceptually different from their components and are practically meaningful (Tisak & Smith, 1994b). They conclude by suggesting that “blanket condemnation” (p. 694) of difference scores has stifled congruence research and suggest that before “throwing out the baby with the bathwater” (p. 694) researchers weigh up the issues and consider potential methodological concerns in their write ups (Tisak & Smith, 1994b). PSIs are used in this research, however the potential limitations of this methodological approach and the possible impact these have on the results found are fully considered in chapters 9 and 10.

Tranberg, Slane and Ekeberg (1993) conducted a meta-analysis on studies investigating the link between satisfaction and congruence. This found that research using the poorest measures of fit produced the highest correlations, which raises some important questions about the value of congruence as a construct. By poorest measures they were referring to subjective measures of fit whereby individuals were simply asked how well they felt they fitted their job or their organisation. If this approach to the measurement of fit yields the best correlations with outcomes it may be that perception of fit is what actually matters, rather than a more objective measurement of fit.

Despite the vast literature that exists on the measurement and examination of congruence and fit there are still those who criticise this approach. The various issues surrounding the correct approach to the measurement of fit as described above cause some problems for the concept. Kammeyer-Mueller (2007) calls for a temporal approach to the measurement of fit, as opposed to the normal static approach that is taken. Their argument for this is based on the idea of organisational socialisation, an individual's fit within an organisation, job or environment could be described as dynamic as both individual and situational factors adapt and change. Tinsley (2000) refers to the present state model that suggests that regardless of individual desires and abilities they will exhibit more positive work attitudes and behaviours in environments that provide high level of supplies. This suggests that congruence may not be important at all.

The issue of incongruence is difficult to examine, as Schein (1978) indicates factors such as availability of alternative jobs and personal restrictions all have an impact on congruence or incongruence. An individual who finds themselves in an incongruent environment with no restrictions can seek alternative employment much more widely than someone with, for example, a young family. Relating this to congruence measurement, individuals who are trapped may seek to change aspects of either themselves or their environment to improve their congruence. This creates a difficult measurement scenario. Talbot and Billsberry (2008) report that the issue of incongruence or “misfit” is under researched. They suggest that incongruence is not always negative and that misfits do not always leave the organisation.

Despite the methodological difficulties associated with congruence research it is still a popular approach within occupational psychology. Awareness of the issues described above enables researchers to improve their methodological approach and to exercise caution in interpretation of their results.

4.3.5 Work Related Outcomes

For congruence to be of practical relevance it has to be related to some sort of work related outcome. The underlying model for congruence is Schneider’s attraction, selection attrition model (Kristof-Brown & Jansen, 2007). The theoretical basis of congruence is that it should impact on attitudes and behaviour, in the case of supplementary fit this is because individuals are attracted to people similar to themselves (Cable & Edwards, 2004). The model also suggests that individuals who do not experience fit will look to move to a position where congruence is increased (Nelson & Billsberry, 2008). The most common outcome considered in congruence studies is job satisfaction whereby fit is measured in terms of the difference between environmental supply and individual desire (Tinsley, 2000). Many other outcomes have been investigated including organisational commitment, stress (Tinsley, 2000), intention to quit (Kristof-Brown & Jansen, 2007), career success (Seibert & Kramer, 2001), and many more. Kristof-Brown and Jansen (2007) suggest that meta-analysis shows that organisational commitment is the outcome most strongly predicted by PO fit ($p=0.51$), followed by job satisfaction ($p=0.40$) and intention to quit ($p=0.38$). Cable and Edwards’ (2004) examination of supplementary and complementary fit suggests that both need fulfilment and value congruence affect work attitudes and behaviours and are equally predictive of work related outcomes. Another important factor affecting the congruence relationship is the relative importance of work to the

individual. Kalleberg and Losocco (1983) suggest that gender and family play an important role in shaping what it is that an individual wants to get out of work. Presumably if work is not a central consideration then the role of congruence will have less of a role to play in predicting satisfaction. Instead other factors such as work life balance are likely to play more of a role.

The work related outcomes that are considered in chapter 9 are job satisfaction and organisational commitment. The affect of career salience on the relationship between congruence and outcomes is also considered.

4.4 Chapter Summary

This chapter has explained the methodological approach taken to the empirical studies outlined in chapters 5, 6, 8 and 9. Consideration of psychometric theory, research within organisations and the measurement of congruence has been made. The specific statistical techniques employed within each of the empirical chapters is explained within the relevant chapter for example factor analysis is considered in chapter 5, MANOVA in chapter 6 and multiple regression in chapter 9. The following chapter is the first empirical chapter of this thesis, it presents an analysis of the psychometric properties of the COI as a measure of career anchors.

Chapter 5

Empirical Assessment of the COI

5.1 Empirical Assessment of the Career Orientations Inventory

This chapter presents the first part of the research conducted. It examines the empirical structure of the career anchor model as measured by the Career Orientations Inventory (COI). As described in chapter 3 the COI was developed by Schein to measure the eight career anchors in individuals. The full details concerning how the COI was developed are not available in the literature. As explained in chapter 3, various authors have examined the psychometric properties of the COI using several versions and the results to date are inconsistent (see chapter 3, section 3.2.3). As a reminder Table 5.1 presents the relevant findings of these studies, the research outlined here aims to address some of these inconsistencies for COI users in the UK by exploring its psychometric properties using a large, varied sample of employees. The specific hypotheses to be investigated here are:

H5.1: The COI is a suitable measure of the career anchors proposed by Schein.

H5.2: The COI exhibits acceptable reliability levels to warrant its description within this thesis as a psychometric test.

H5.3: The career anchors measured by the COI may change more with extreme life or work experiences than without them.

H5.4: The COI will demonstrate an acceptable level of content and construct validity.

Table 5.1 Summary of studies on the psychometric properties of the COI

Study	n	Sample	COI	FA method	Factors	Test retest	Internal rel.
DeLong (1982)	320	Male graduates from one US university	48 item	r-factoring factoring	9	(n=73) 0.38-0.92	
Igbaria, Greenhaus and Parasuraman (1991)	464	ACM members -US	41 item	Varimax	11		0.72-0.91
Crepeau, Cook, Goslar and McMurtrey (1992)	321	IS personnel- US	41 item	PCA varimax	8		0.78-.084
Igbaria and Baroudi (1993)	Study 1: 198	US Data processing management association	Study 1: 41 item	Study 1: Varimax	11		0.61-0.93
Jiang and Klein (1999)	101	Entry level IS professionals - US	36 items	PCA, varimax	9		
Custido (2000)	114	Academic Executives from the Philippines	41 item,	PCA – varimax	8		0.78-0.84
Bridle and Whapham (2003)	187	Career changers - UK		PCA	3		0.56-0.82
Marshall and Bonner (2003)	423	Graduate students, Australia	40 item,	EFA	9		
Ramakrishna and Potosky (2003)	163	IS professionals from one organisation - US	41 item,	PCS, varimax	9		
Danziger, Rachman-Moore and Valency (2008)	1847	Israeli working adults	40 item	CFA	9		0.60-0.88

Key: PCA = Principle components analysis, EFA = Exploratory factor analysis, CFA = confirmatory factor analysis

The main objective of this study was to examine the psychometric properties of the COI using an appropriately large and varied UK based working sample. This section outlines the theory behind factor analysis, reliability and validity.

5.2.1 Factor Analysis

Factor analysis is a statistical technique used for identifying groups or clusters of variables from a data set. It is used extensively in the development of psychometric tests to examine the latent variables measured by the test. Field (2006) describes three main uses of factor analysis; 1) to aid the understanding of the structure within a set of variables, 2) to assist the construction of a questionnaire and measure the underlying variables and 3) to reduce a data set to a more manageable set whilst still retaining as much of the original information as possible. Factor models separate out common variance (as defined by the common factors) and unique variance including both specific variance and error. Essentially there are two approaches; exploratory factor analysis (EFA), used to explore data sets and discover the underlying factors and confirmatory factor analysis (CFA) used to test a specific hypothesised structure. As mentioned above various researchers have used factor analysis techniques to examine the factor structure measured by the COI. These studies have reported a variety of structures ranging from three to 11 factors (see Table 5.1). Given this, to use CFA would be inappropriate as based on previous research it is not possible to be confident about the number of factors that should be present. Factor structures can also change with different cultural groups due to changes in social norms (Tabachnick & Fidell, 2007). As a result the approach used in this study uses EFA to explore the structure that exists within the data set.

5.2.1.1 Approaches to factor analysis

Within EFA different methods of factoring can be employed. The two main approaches are factor analysis (FA) (e.g. principal axis factoring) and principal components analysis (PCA). The two methods usually provide similar results when used with large matrices (Kline, 1993) but there are fundamental differences between these. FA uses a mathematical model to estimate the factors whereas PCA concentrates on data reduction by decomposing the data set into linear variables (Field, 2006). PCA assumes that all variables are completely reliable and as such is

not strictly a statistical technique as no error term is included in the analysis (Rust & Golombok, 1992). The aims of the current research are to estimate the underlying factors within the data set from the COI, therefore FA is deemed to be the most suitable technique.

5.2.1.2 Factor analysis assumptions

There are a number of data checks that need to be completed before EFA can be conducted. These ensure that the data are suitable for this type of analysis. Many researchers have discussed the importance of sample size in factor analysis as it impacts upon the reliability of the results (MacCallum, Widaman, Zhang & Hong, 1999). Osbourne and Costello (2004) indicate that larger samples are more suitable than small samples as they minimise the probability of errors and increase the generalisability of results. There are no universally agreed subject to item ratios (Osbourne and Costello, 2004). However, Nunnally (1978) suggested that the sample size required should give ten times as many participants as variables. This is thought to be a conservative estimate as Barrett and Kline (1981) found that factors were clear with a ratio of 2 to 1 and that increasing the ratio to 3 to 1 did not create any improvement. Field (2006) and Tabachnick and Fidell (2007) indicate that a sample size of at least 300 is good regardless of the number of variables.

A second data consideration involves the amount of common variance shared by the variables. This is measured by the Kaiser-Meyer- Olkin (KMO) measure of sampling adequacy. The KMO measure varies from 0 to 1. Kaiser (in Field, 2006) suggests that values between 0.5 and 0.7 are mediocre, 0.7 to 0.8 are good, 0.8 to 0.9 are great and values greater than 0.9 are superb.

Before running the factor analysis it is also necessary to consider the intercorrelations between the variables under consideration. As factor analysis is looking for clusters of variables it would be reasonable to expect some correlations between them. Bartlett's test of sphericity is used to assess whether the correlation matrix resembles an identity matrix where all variables are independent from each other (Field, 2006). If Bartlett's test of sphericity is significant ($p < .05$) this ensures the data are appropriate for EFA as there are some correlations between the variables being examined.

5.2.1.3 Factor extraction

The decision concerning how many factors to retain is critical (Steger, 2006; Tabachnick & Fidell, 2007) and there is considerable debate over how this should be approached (Field, 2006). Steger (2006) advocates the use of multiple methods to identify the correct number of factors to extract. The approach advocated by Cattell (1946 as cited in Field, 2006) is to examine the scree plot, as the cut off point for extraction should be at the inflexion of the curve. It has been suggested that this method is fairly reliable for sample sizes over 200 (Stevens, 1992, as cited in Field, 2006). However, this method is not exact as it involves the judgement of the researcher as to the point at which this inflexion occurs (Tabachnick & Fidell, 2007). An alternative approach recommended by Kaiser (1960 as cited in Field, 2006) is to extract factors with eigen values greater than one. Tabachnick and Fidell (2007) suggest that if the sample size is large and the number of variable is 40 or less this criterion is “probably about right” (p.644). In this research both Cattell’s and Kaiser’s approaches will be used.

5.2.1.4 Factor rotation

Once the data have been checked and factors extracted rotation is used to improve the interpretability of the solution that has been found (Tabachnick & Fidell, 2007). This enables clearer discrimination between factors (Field, 2006). There are two main approaches to factor rotation. Orthogonal, for data sets where there are believed to be no correlations between factors, for example varimax rotation, and oblique where it is expected that the factors will correlate, such as direct oblimin rotation. Some authors argue that oblique rotation offers a more realistic view of reality by allowing factors to be correlated (Thurstone, 1947 as cited in Browne, 2001). Despite this, orthogonal Varimax rotation is still the primary technique used in published articles (Fabrigar, Wegener, MacCallum and Strahan 1999). Field (2006) argues that oblique rotation should only be used when there is a good theoretical reason to assume that the factors could be related. Orthogonal rotation is used here.

5.2.2 Reliability

Psychometric tests must demonstrate reliability; that is they should produce results that are consistent over time. This section considers the different types of reliability and explains how this concept will be examined in relation to the COI. Reliability can be determined by examining the average correlation between the items within a test

or a test scale. This is termed internal consistency or internal reliability (Nunnally, 1978). This is a measure of the consistency with which the items on the scale are measuring the same construct. The most common measure of internal consistency is Cronbach's alpha (α). Table 5.1 presents the α levels found for the COI in previous studies. Generally levels of 0.7 or above are deemed acceptable (Schmidt, 1993). Kline (1999 as cited in Field, 2006) notes that values of 0.8 should be the cut off point for intelligence tests, 0.7 for ability tests whereas for personality measures values below 0.7 can be acceptable. However Cronbach's alpha should be interpreted with caution. Cortina (1993) demonstrates that the statistic increases with the number of items in a test. Therefore a test with a large number of items can exhibit high α levels even if the correlations between items are low. On the other hand, if the Cronbach's alpha level is too low then Nunnally (1978) suggests the test may be too short or the items within the test may have little in common.

Another approach to the measure of reliability is concerned with reliability over time and is called test-retest reliability. The same test is administered to the same individuals at two separate points in time. Their scores at the different time points are then correlated. The optimum time lapse between testing points to assess the reliability of a test with stable characteristics is one to two weeks (Freeman, 1962; Nunnally, 1978). Any shorter and recall effects may come into play (Freeman, 1962), any longer and systematic changes in people may have started to occur (Nunnally, 1978). Nunnally (1978) suggests that if test retest or alternate forms administered six months apart correlate less than tests administered two weeks apart then this provides evidence for systematic changes in people. In terms of reliability that can be expected from a values measure like the COI; comparable instrument data can be found in Table 5.2. These data show a variety of coefficients some that have been taken over long time periods. The figures from the Strong inventories have been taken over an 18 year time period. These show that for individuals working in public administration the re-test coefficient is 0.48 whereas for engineers it is 0.72 suggesting a difference according to occupation in the stability of the constructs being measured. Schein (1978) believed career anchors developed as a result of accumulation of work experience and as such may be subject to some changes.

Table 5.2 Reliability coefficients of career values and preferences measures

Instrument	Test-Retest	Internal Consistency	Reported in
Kuder Inventories	0.50-0.85 (av. 0.85) men 0.60-0.80 (av.0.68) women	0.85-0.95 (av.0.90)	Freeman (1962)
Strong Inventories	1 week – 0.85 18 years (public admin) 0.48 18 years (engineer) 0.72		Freeman (1962)
CE SES	2 week 0.30-0.69	0.49-0.76	Bacanli (2006)
Career Key	3 weeks .66-0.92	KR20 0.64-0.92	Jones (1990)
Vocational Preference Inventory	1 year college freshmen 0.61-0.86 6 weeks college seniors 0.74-0.98	KR20 0.85-0.91	Holland (1985)

Freeman (1962) indicates that these changes or reductions in reliability coefficients over longer periods of time do not suggest a defect in the instrument. Rather they reflect the way in which our interests and values can and do change over time as we gain more varied experiences. With this in mind the studies conducted here examine both short term test retest with the aim of measuring the reliability of the COI as a measure, and longer term stability by conducting another test retest over a longer time period.

Reliability only demonstrates that the test is measuring consistently. It is not able to show that the test is measuring the construct it was designed to measure. To show this the validity of the test also needs to be examined. This is considered in the next section.

5.2.3 Validity

Validity is concerned with what the test is actually measuring. A test can have high reliability but still not measure what it is supposed to measure, this is why it is

important for it to have both high reliability and validity. There are four different types of validity, the most simple being face validity, where individuals read through the items and make a judgement as to whether it is measuring what it purports to be measuring. Anastasi (1988) defines face validity as “not validity in the technical sense; it refers not to what the test actually measures, but to what is appears superficially to measure. Face validity pertains to whether the test “looks valid” to the examinees who take it” (p.144). Face validity is often overlooked in the analysis of psychometrics but it is an important factor as it can have an effect on test scores. For example if face validity is high it has been shown to increase respondents’ test taking motivation (Bornstein, 1996, Chan et al., 1997). Face validity has been measured in a variety of ways, Martensson, Archenholtz and Dahlin-Ivanoff (2007) used qualitative methods to analyse focus group data on face validity of their items. Others have used short questionnaires to rate the accuracy of test interpretation, how much individuals liked the test and how much the content of the test represented the construct being measured (Delprato, 1975; Chan et al., 1997). One problem with face validity is known as the “Barnum effect”, the tendency for test takers to accept generalised feedback regardless of its accuracy (Delprato, 1975).

Content validity is similar to face validity but it gathers data from so called experts on the issue of whether the test looks like it is measuring what it should be. Content validity has been defined as “the degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment purpose” (Haynes, Richards & Kubany, 1995, p238). To assess content validity Haynes, Richards and Kubany (1995) recommend that all elements of the measure be examined including instructions to participants, response scale and individual items. They go on to suggest that descriptive statistics should be generated by multiple experts on factors such as specificity, clarity and representativeness. Content validity is a necessary consideration to ensure that a measure is plausible. However, this approach is not without its limitations. Rubio, Begg-Weger, Tebb, Lee and Rauch (2003) indicate that the experts’ opinions will not be given without bias and that content validity does not take into account concepts that could be missing from the measure but important to the construct under consideration.

Criterion validity concerns the relationship between the scores on the measure and some pre-identified criterion. It can be measured predictively using a longitudinal approach where individuals are tested and then their future performance is tracked.

An example of this approach is the study by Silver and Barnette (1970) who conducted a four-year follow up of high school students who had completed the Minnesota Vocational Interest Inventory. Variables included initial test scores, college grades and actual vocation. This approach is not always possible because of the time involved and the opportunity to follow up participants over time may not be open to the researcher. An alternative approach to measuring criterion validity is often employed, known as concurrent validity. In the concurrent approach an individual's test scores are compared to a criterion measure that is available instantly. For example Watkins and Hector (1990) examined the concurrent validity of the Social Interest Inventory (SII). They compared individual test scores on the SII with ratings of number of close friends, number of close relatives and number of interactions with close friends and relatives. The concurrent approach is the one taken with the COI. Criterion validity is examined by considering the role of congruence and the relationship between career anchors and work related outcomes. This study is described in full in chapter 9 of this thesis.

Finally, construct validity, refers to the measures' ability to make inferences about the construct in question. It is important for all types of psychometric tests (Cronbach & Meehl, 1955). Content validity is an important component of construct validity as it provides evidence about how much the items within the assessment are representative of the target construct (Haynes, Richards & Kubany, 1995). Construct validity is normally approached by comparing the measure in question to others measuring similar constructs to establish functional relationships between variables (Nunnally, 1978). By comparing scores on the measure of interest with scores on other tests, it is hoped that convergent validity will be found with tests measuring similar or the same construct and divergent validity for tests measuring different constructs (Huysamen, 2002). However, Wallis (2004) argues that this approach is not sufficient as there are so many debates surrounding psychological constructs and their measurement. Therefore comparison to pre-existing measures does not guarantee that the construct under consideration is the right one. Despite this the use of construct validity alongside other measures of validity is the most commonly used approach to examining measures' validity.

There is limited reported evidence to support the validity of the COI as a measure of career anchors (see discussion in chapter 3, section 3.2.3). The studies reported here focus only on face and construct validity with the data in chapter 9 examining criterion validity.

The following sections describe the approach taken to test the following hypotheses:

H5.1: The COI is a suitable measure of the career anchors proposed by Schein.

H5.2: The COI exhibits acceptable reliability levels to warrant its description within this thesis as a psychometric test.

H5.3: The career anchors measured by the COI may change more with extreme life or work experiences than without them.

H5.4: The COI will demonstrate an acceptable level of face and construct validity

5.3.1 Procedure and sample

5.3.1.1 Factor Analysis

To gather the data necessary for factor analysis of the COI, 27 UK based organisations were contacted by letter and invited to take part in the study. This was an opportunity sample as the researcher had personal contacts in all of the organisations. A list of the characteristics of the organisations that took part can be found in the Appendix 6. The letter contained an example of the paper copy of the questionnaire, and an example of the feedback that individuals could request. Finally the letter outlined the three return options for the questionnaire, paper, online or via e-mail. The online questionnaire was made available using survey monkey and via e-mail the survey was available as an Excel spreadsheet. The first page of the questionnaire provided an introduction to the purpose of the study and explained how long it would take to complete. Confidentiality was assured and reassurance about how the results would be used was provided. Participants were offered a personalised career anchor profile in return for completing the questionnaire (see Appendix 7). To receive the profile, participants provided the researcher with a valid e-mail address. This was optional; if participants wished to remain anonymous they could. On the final page of the questionnaire participants were thanked and the researcher's e-mail address was made available in case participants wished to find out more information or to withdraw from the study. Five of the organisations were recruitment agencies or consultancies; their letters also asked if their clients would also be willing to take part. This was to try and encourage a wider variety of participants.

5.3.1.2 Test Retest

In addition data for test re-test reliability analysis were gathered from two sources using the online version of the questionnaire: a private sector transport organisation and from a postgraduate MSc course consisting of part time students. As the questionnaire was completed online, date of receipt could be logged and the second questionnaire was sent out exactly 14 days later. Within the private sector organisation the link to the online questionnaire was made available to participants on a generic training course.

5.3.1.3 Stability

To examine the long-term stability of the measure a random sample of 150 participants from those who provided their e-mail address from the factor analysis sample (n=658) were contacted again by e-mail 12 months after originally completing the questionnaire. The random sample was generated using a computerised random number generator. The time period was chosen to allow for some changes to have occurred in participants' lives and careers without risking holding up the research project.

Participants were sent the link to complete the COI online, and to report any significant changes that had occurred in their career or personal life. Examples of significant changes were included in the questionnaire instructions (such as, marriage, relocation and redundancy).

5.3.1.4 Face Validity

The COI was administered to a sample of union members from one police organisation. The COI was made available online, participants completed the measure and were sent a profile showing their results (example in Appendix 7). With the profile a questionnaire designed to assess face validity was also sent to participants.

5.3.1.5 Construct Validity

The COI and the WVQ (described below) were administered on line using survey monkey within three organisations, one public sector and two private sector. The link to the questionnaire was sent to the human resources managers of each organisation.

These managers had been contacted previously by the researcher and agreed that certain departments within their organisation would take part in the study. It was agreed that no feedback would be given on the questionnaires for this particular part of the study.

5.3.2 Measures

The first section of the COI questionnaire was designed to collect demographic details of the participants. This information was collected to enable the analysis that is described in chapter 6 of this thesis. The version of the COI used was adapted with permission from Igbaria and Baroudi (1993). This can be found in full in Appendix 5.

The revised version of the Work Values Questionnaire (WVQ) (Mantech, 1983, revised by Furnham, 1999) was chosen as a comparative measure for the construct validity study. The WVQ consists of 37 work related values and requires participants to indicate on a 6 point scale how important each of these values are in making them feel content at work. Furnham (2005) indicates that this measure has been used in assessment centres for over a decade. Furnham (2005) found evidence for a four factor structure within this measure. The factors identified were Work relationships, Influence and Advancement, Financial and Working Conditions and Autonomy and Use of Skills.

5.4 Results

5.4.1 Response rate

5.4.1.1 Factor Analysis

Unfortunately it is not possible to give exact numbers of participants from each organisation contacted because some questionnaires were returned anonymously and some provided personal not work e-mail addresses. From the e-mail addresses provided for career anchor profiles it can be said that responses were received from all of the 27 organisations contacted by letter and from individuals at nine other organisations. Using this method a total of 621 responses were received, over a period of 3 months. However, 15 of these were incomplete, leaving a total of 606 useable responses.

A breakdown of the demographic characteristics of the sample can be found in Table 5.3 alongside the UK labour force statistics (Statistics, 2006) to indicate how representative the sample is of the UK working population. The sample is more varied than that found in previous studies using the COI (see Table 5.1). However, the sample used here cannot be said to be representative of the UK working population as it has a higher percentage of female workers, a higher percentage of public sector workers and a higher percentage of under 35s than found in the general UK working population. In addition the sample has a high percentage of professional workers. This may have an impact on the results found and is considered in section 5.6 and chapter 10 as a potential limitation of this analysis.

5.4.1.2 Test Retest

52 useable responses were gathered from the private sector organisation at time one. The data gathered at time one was added to the sample described above giving a total of 658 responses for the factor analysis. 50 responses were received from the same organisation at time two. For the postgraduate students the link to the online questionnaire was provided at the beginning of a lecture. 36 questionnaires were received at time one and 33 at time two giving a total test-retest sample size of 83.

5.4.1.3 Stability

60 responses were received from the 150 participants contacted. Of these 54 were useable as six responses were received that were not complete, this gives a 40% response rate. 15 of the participants reported significant changes.

5.4.1.4 Face Validity

Two samples were used from one police organisation. The first consisted of 22 members of police staff (not police officers – see chapter 7) chosen from five different departments.

The second sample consisted of union police staff members from the same police organisation. 122 responses were received from this sample.

Table 5.3 Factor Analysis Sample: Demographic Details (n=658)

Variable	Frequency	Percentage	Percentage of UK Labour force statistics (2006)
Gender			
Male	244	37.1%	53%
Female	414	62.9%	47%
Age			
16-25	148	22.5%	14%
26-35	256	38.9%	29%
36-45	147	22.3%	31%
46-55	74	11.2%	15%
56+	33	5.1%	11%
Education			
GCSE	86	13.1%	Not available
A-Level	145	22.1%	Not available
Degree	226	34.3%	Not available
Postgraduate	170	25.8%	Not available
Doctorate	31	4.7%	Not available
Job Level			
Clerical	92	13.9%	Not available
Manual	41	6.2%	Not available
Professional	363	55.2%	Not available
Junior Manager	82	12.5%	Not available
Middle Manager	63	9.6%	Not available
Senior Manager	17	2.6%	Not available
Organisation Type			
Private Sector	390	59.3%	79%
Public Sector	268	40.7%	21%
Police/Non Police			
Police	136	20.7%	Not available
Non Police	522	79.3%	Not available

5.4.1.5 Construct Validity

The link to the questionnaire was sent to 183 members of staff from the three organisations contacted. 83 responses in total were received from survey monkey only 76 of these were complete giving a 41% response rate.

5.4.2 Factor Analysis

As stated above, previous studies on the COI have shown large variations in the resulting number of factors (see Table 5.1). The approach taken to factor analysis within each article is also different (see Table 5.1). As explained above it was decided that the most appropriate approach to this analysis would be to use exploratory factor analysis due to the current uncertainty concerning the number of factors in existence. Some authors suggest that, if the sample size allows, it is appropriate to split the sample and conduct two exploratory factor analyses. The analysis of the first half of the sample is used to evaluate the items and scales and to derive an appropriate final version of the measure (DeVellis, 1991). The second half of the sample is used to cross-validate the findings from the first analysis. Field (2006) supports this approach by saying if the same structure is found within two or more samples it makes it more appropriate to make generalisability claims from principal axis factoring. DeVellis (1991) states a preference for this approach over confirmatory factor analysis as the analysis has not been guided to look for a certain pattern within the data thus reducing the risk of making a priori errors.

5.4.2.1 Splitting the Sample

Participants were randomised into two groups. Chi square analysis found no significant differences in gender, age, job level, education or sector. To examine item response differences between groups independent t-tests were conducted for each item. No significant differences were found for any item. The groups were labelled as G1 (n=329) and G2 (n=329).

It was concluded that the main data set had been separated into two appropriate groups and there were no significant differences between the groups that would contribute to bias within the analysis.

5.4.2.2 G1 Data checking

For factor analysis to be appropriate there should be some relationships between the variables being considered in the analysis. A significant result from Bartlett's test of sphericity indicates that this is the case (Field, 2006). Bartlett's Test of Sphericity was significant ($p < 0.001$) for these data suggesting they are appropriate for factor analysis.

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy indicates the degree of common variance shared by the variables. Bryman and Cramer (2001) suggest for data to be suitable this figure needs to be 0.60 or above. Kaiser (as cited in Field, 2006) states that values between 0.7 and 0.8 are good. The KMO measure of sampling adequacy in G1 is 0.771 indicating that the data are suitable for factor analysis.

5.4.2.3 G1 Factor Extraction

Principal axis factoring was used to analyse the data as this approach best suited the aims of this study. Field (2006) suggests that one way to decide whether to use oblique or orthogonal rotation is to try both. As previous research has found some evidence of relationships between each of the career anchors (e.g. Yarnall, 1998), oblique rotation, specifically direct oblimin rotation was used initially. However, examination of the factor correlation matrix revealed no correlations between factors. Pedhazur and Schmelkin (1991, in Field, 2006) suggest that if oblique rotation reveals negligible correlations between factors then it is appropriate to use the orthogonally rotated solution. As a result, the factor analysis was repeated using orthogonal rotation, specifically Varimax as recommended by Field (2006).

Kaiser's method (as cited in Field, 2006) of factor extraction selecting factors with eigen values greater than one suggested an eight factor structure within the data accounting for 58.2% of the variance. Examination of the scree plot using Cattell's method supported this extraction method for this data set. Using the guidance from Stevens (1992 in Field, 2006) factor loadings of over 0.298 were examined when determining the details of the model as the sample size was greater than 300. Table 5.4 shows the variance explained by each factor and Table 5.5 indicates the loadings of the items on each of the eight factors.

The results suggest that H5.1 is supported. An eight factor structure was found that resembled the typology proposed by Schein (1993). Some factors emerged more cleanly than others and were found exactly as proposed by Schein (e.g. LS, SV, CR, and AU). Factor 7, GM contained four out of the five items proposed by Schein for that factor.

Table 5.4 Total Variance Explained by Factors (G1)

Factor	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1 (PC)	6.087	15.217	15.217
2 (LS)	4.853	12.133	27.350
3 (SV)	3.170	7.924	35.274
4 (SE)	2.761	6.903	42.177
5 (CR)	2.017	5.043	47.220
6 (AU)	1.530	3.826	51.046
7 (GM)	1.457	3.641	54.687
8 (FE)	1.396	3.489	58.176

5.4.2.4 G2 – cross validation of factor structure

The second half of the original sample G2 (n= 329) was used to attempt to replicate the factor structure found using G1. Bartlett's Test of Sphericity was significant ($p < 0.001$) and the KMO measure of sampling adequacy in G2 is 0.778 indicating that this data set is suitable for factor analysis. The two analyses were compared using the method advocated by Hashemi (1981 as cited in Kline, 1994). This method compares the percentage of items with their highest loading on keyed scales and indicates that an average percentage of 94 is good. Table 5.6 shows the number and percentage of items with their highest loadings on their keyed scale. The average percentage of items with their highest loadings on key scales was 96% which, according to Hashemi (1981, as cited in Kline, 1994) is good. Hashemi also considered the mean absolute factor loadings and reported a minimum of .037, maximum of 0.51 with a mean of 0.43. In this study the minimum loading was 0.48, maximum 0.68 and the mean 0.48 (reported in Table 5.7). Based on Hashemi's criteria it can be concluded that the factor structure has been replicated successfully in G2.

Table 5.5 Results of Principal Axis Factoring (G1)

	PC 1	LS 2	SV 3	SE 4	EC 5	AU 6	GM 7	FE 8
ch31	.705							
ch15	.698							
ch7	.693							
ch23	.656							
gm10	.542							
ls32		.780						
ls40		.762						
ls24		.744						
ls8		.709						
ls16		.702						
sv30			.818					
sv22			.750					
sv6			.694					
sv38			.623					
sv14			.586					
se28				.806				
se36				.763				
se4				.705				
se20				.633				
se12				.490				
fe25				.320				
cr5					.773			
cr21	.330				.765			
cr37					.763			
cr29					.707			
cr13					.425			
au3						.779		
au11	.406					.676		
au27						.608		
au35						.589	.494	
au19						.436		
gm34							.799	
gm26							.607	
gm18							.601	
gm2	.343						.348	
fe9								.741
fe17								.718
fe1								.524
fe33			.319					.503
ch39								.301

Extraction method: Principal Axis Factoring.

Rotation method: Varimax with Kaiser Normalization.

Only loadings > 0.298 displayed.

Table 5.6 Number and percentage of items with their highest loading on the keyed subscale.

Scale	Number of items	G1	G2
1 (PC)	4	(4) 100%	(4) 100%
2 (LS)	5	(5) 100%	(5) 100%
3 (SV)	5	(5) 100%	(5) 100%
4 (SE)	5	(5) 100%	(4) 80%
5 (CR)	5	(5) 100%	(5) 100%
6 (AU)	5	(5) 100%	(5) 100%
7 (GM)	5	(5) 100%	(5) 100%
8 (FE)	5	(5) 100%	(4) 80%

Table 5.7 Mean loadings of the represented subscale items.

Scale	G1	G2
1 (Pure Challenge)	.48	.49
2 (Lifestyle)	.67	.65
3 (Sense of Service)	.67	.67
4 (Security and stability)	.62	.59
5 (Creativity)	.58	.61
6 (Autonomy)	.60	.56
7 (General Management)	.67	.68
8 (Functional Expertise)	.52	.51

5.4.2.5 Factor Analysis Summary

In summary, the analysis reported here suggests an eight factor structure as proposed by Schein. The eight factor solutions found here contrasts with previous research that has instead, suggested different factor solutions (see Table 5.1), often splitting either the security or the creativity anchor in two. No evidence was found within these data to support this approach. Possible reasons for this are considered in section 5.6 below. In conclusion the data shows that H1 can be supported.

5.4.3 Reliability Analysis

As explained in chapter 4, reliability is a key concept for any psychometric instrument. Reliability refers to the consistency with which the instrument is measuring the construct in question. Schein (1978) believed that once an

individual's career anchor had been developed properly, through exposure to work, it became a stable construct. As such, once established, one would not expect to see much change in an individual's career anchor over time. However, Schein gives no guidance as to how we know when an anchor has been established. Schein (1978) then suggests that even those stabilised through time, can change if the individual experiences a significant life change. Test re-test reliability enables the measurement of consistency over time. In this study the concept of test retest reliability is measured in two ways. First, internal consistency was measured followed by examination of test-retest reliability with a short, two-week gap left between testing periods. Finally, long-term stability was examined by leaving a twelve-month gap between testing periods.

5.4.3.1 Internal Consistency

Internal consistency was examined for both G1 and G2 using Cronbach's alpha. A number of researchers (Brindle & Whapham, 2003a; Kline, 1994; Peterson, 1994) suggest that α coefficients of greater than or equal to 0.70 indicate acceptable levels of internal reliability. Table 5.8 shows the alpha levels for each scale of the COI with both data groups. The internal consistency data helped to determine which items should remain in each of the factors. If the alpha level was improved after removing the item, that item was permanently removed. The α coefficients reported in Table 5.8 show acceptable levels of internal reliability for 7 of the scales in this sample. One item was removed from the COI (fe25), as Table 5.5 indicates that it loads on the security scale but it reduces the internal consistency of that scale if it is included so a decision was taken by the researcher to remove this item. The factor analysis was conducted again to ensure that the removal of this item did not affect the factor structure. The results for each group are comparable and the internal consistencies of each scale remain fairly constant from group 1 to group 2 suggesting that the scales are relatively stable (DeVellis, 1991) and showing some support for H5.2

5.4.3.2 Test Retest Reliability

Lowenthal (1996) suggests that for scales with ten or fewer items a reliability of 0.6 is acceptable. The test-retest figures are shown in Table 5.9 and all show acceptable values indicating a good level of test-retest reliability. Other researchers have examined test-retest and report values ranging from 0.32-0.92 (see Table 5.1). Other interest inventories such as the Strong inventories and Kuder inventories report test-retest coefficients of between 0.5 and 0.85 (as cited in Freeman, 1962).

The coefficients found here range from 0.68 to 0.89 indicating a good level of reliability in comparison to other similar measures.

Table 5.8 Cronbach Alpha Reliabilities of each subscale (G1 & G2)

Scale	Cronbach α (g1)	Cronbach α (G2)
Pure challenge	.74	.71
Lifestyle	.83	.81
Sense of Service	.78	.80
Security and Stability	.77	.77
Creativity	.75	.72
Autonomy	.73	.71
General Management	.73	.73
Functional Expertise	.60	.59

Table 5.9 Test Retest Reliability Coefficients (n=83)

Anchor/Scale	Value of r
Pure challenge	.77***
Lifestyle	.89***
Sense of Service	.84***
Security and Stability	.89***
Creativity	.83***
Autonomy	.77***
General Management	.87***
Functional Expertise	.68***

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5.4.3.3 Long-Term Stability Analysis

As a first step, each participant's scores from time one and time two were correlated. The Pearson's correlation coefficients are shown in Table 5.10. The coefficients range from 0.43 (for TF) to 0.70 (for GM). As indicated above correlations of 0.6 or above are said to indicate a satisfactory level of reliability. With a delay of 12 months between administrations 5 out of 8 scales demonstrated acceptable test-retest reliability (above 0.6). Next the 15 individuals who had reported a significant change were considered individually. All reported changes were deemed to be significant by the researcher and are described in Table 5.11. This table also shows any changes

to the participant's career anchor profile. Figures highlighted in red indicate a change of more than five points on a scale. To assess if these changes had any impact on the test-retest reliabilities of the COI these 15 participants were removed from the analysis and the scores were correlated again (see Table 5.10). This time the coefficients ranged from 0.58-0.73 and only 1 scale is below the acceptable 0.6 level. Looking at all of the test-retest results in Table 5.10 it can be seen that the two week delayed test-retest reliabilities are the highest. However, it also shows that for the 12 month delayed coefficients, when the 15 participants who reported a significant life change are removed, every scale sees a slight improvement in reliability.

Table 5.10 Reliability coefficients for test retest with two week and 12 month delay

Anchor	Test retest (2 week delay) n=83	Stability (12 month delay) n=54	Stability (12 month delay) with participants reporting changes removed n = 39
Functional Expertise	.68**	.43**	.58**
General Management	.87***	.70**	.71**
Autonomy	.77***	.56**	.68**
Security and Stability	.89***	.56**	.61**
Creativity	.83***	.63**	.73**
Sense of Service	.84***	.51**	.68**
Pure Challenge	.77***	.66**	.67**
Lifestyle	.90***	.68**	.73**

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.11 Long term stability sample significant life events

FE T1(T2)	GM T1(T2)	AU T1(T2)	SE T1(T2)	CR T1(T2)	SV T1(T2)	PC T1(T2)	LS T1(T2)	Change
20 (11)	21 (23)	21 (19)	19 (21)	14 (16)	12 (22)	19 (19)	18 (19)	Divorce Change of job
15 (12)	10 (13)	15 (19)	14 (19)	16 (18)	14 (19)	13 (12)	11 (27)	Marriage Relocation
21(17)	21(18)	14(22)	27(28)	20(18)	21(22)	16(13)	21(29)	Had child
18(19)	11(8)	21(18)	10(27)	11(9)	20(27)	18(15)	29(30)	Engaged Bought House
28(27)	7(9)	11(9)	28(30)	8(9)	13(29)	13(12)	29(30)	Had child
23(25)	12(10)	15(27)	17(21)	14(18)	25(22)	23(22)	28(28)	Engaged Qualified as accountant
26(19)	12(13)	17(15)	24(27)	7(7)	26(22)	19(9)	28(30)	Was in new job at time 1 Now settled into role
20(20)	13(10)	16(20)	21(25)	10(13)	21(28)	19(17)	17(27)	Moved in with partner
22(9)	19(20)	22(14)	17(15)	19(16)	15(8)	22(16)	17(18)	Changed job
28(15)	17(18)	21(15)	20(22)	26(12)	29(24)	29(21)	16(18)	Completed PhD New role as lecturer
24(14)	9(10)	23(23)	13(21)	20(17)	18(13)	24(28)	27(30)	Pregnant
22(21)	15(18)	16(18)	18(21)	14(24)	20(27)	19(22)	22(23)	Changed job
30(28)	19(9)	24(17)	27(21)	22(12)	24(25)	17(16)	28(25)	Organisation making redundancies
24(16)	23(23)	26(22)	21(17)	30(20)	27(27)	20(20)	29(29)	Pregnant
13(23)	14(12)	19(21)	23(28)	7(11)	20(16)	13(17)	27(26)	Buying a house

5.4.3.5 Reliability Summary

To examine reliability two approaches have been taken. This is consistent with analyses of other interest and values inventories (Freeman, 1962). The first

approach looked at internal consistency using Cronbach's alpha. Seven of the eight scales exhibit good levels of internal consistency. The Functional Expertise score is below that normally acceptable so any results from this scale should be interpreted with caution. The full range of internal consistency within these two analyses runs from 0.59 to 0. The coefficients reported in previous research range from 0.56 to 0.93 (see Table 5.1).

Next, test-retest reliability was examined by leaving a two-week gap between data collections. The strongest reliability coefficients were found using this approach ($n=83$), according to psychometric theory the alpha levels of greater than 0.6 indicate a good level of reliability in the test. The sample used to assess stability is very small ($n=54$) with only 15 of these reporting a significant change. However, what these results do show is that when these 15 participants are removed the reliability coefficients increase but still not to the level of the two-week delay. Freeman (1962) argues that this would show not a defect in the instrument but an indication that the constructs being measured do and have changed. The 15 changes reported are extremely varied. This combined with the small sample size makes it difficult to generalise about the effect that different types of changes will have on an individual's career anchors.

This study demonstrates that there is a need for further research into the development and changes to career anchors over time. A longitudinal study, similar to that originally conducted by Schein, which generates in-depth qualitative data could provide useful insights into this change process. This type of information could be invaluable to organisations and individuals trying to make long term career plans.

To summarise this reliability study it can be said that H5.2 (The COI exhibits acceptable reliability levels to warrant its description within this thesis as a psychometric test) can be supported as the internal consistencies are mostly acceptable with the exception of the FE scale and test-retest reliabilities for all eight scales are above the acceptable value. H5.3 (the career anchors measured by the COI may change more with extreme life or work experiences than without them) received some support from a small sample of individuals who experienced a wide variety of changes.

5.4.4 Validity Analysis

The validity data available to date on the COI are extremely limited. The only published data are that by Brindle and Whapham (2003b) who found some evidence of construct validity by comparison of the COI with Super's Work Values measure. As a reminder their findings are shown again in Table 5. The correlations above 0.25 were significant and the ones in bold text are described by Brindle and Whapham (2003b) as "conspicuously high". A full discussion can be found in chapter 3 of this thesis.

Table 5.12: Correlations between Career Anchors and Super's Work Value scales (from Brindle & Whapham, 2003b)

	FE	GM	AU	SE	CR	SV	CH	LS
Intellectual Stimulation	.23	.18	.14	-.26	.03	-.61	.52	-.17
Altruism	.08	.14	.12	.10	.13	.7	.00	.27
Economic Return	.07	.02	.07	.94	.11	-.04	-.09	.03
Variety	.12	.29	.19	.26	.09	.13	.26	-.04
Independence	.17	.24	.62	-.21	.53	.02	.19	.02
Prestige	.34	.31	.21	.01	.19	-.13	.22	-.12
Aesthetics	-.04	.16	.16	.11	.33	.33	-.20	.24
Relationship with associates	.06	.01	-.16	.18	-.11	-.63	-.19	.08
Security	.11	.02	-.07	.60	-.02	.55	-.12	.18
Way of life	.2	-.09	.08	.01	.12	.18	-.06	.44
Relationship with manager	.06	.04	-.20	.20	-.25	.12	-.13	.27
Surroundings	.19	-.02	.02	.15	.04	-.01	-.19	.29
Achievement	.20	.21	.02	.08	.02	.18	.26	.09
Managing Others	.27	.51	.07	-.08	.08	.17	.17	-.07
Creativity	.35	.26	.32	-.33	.30	.26	.46	-.03

5.4.4.1 Face Validity

The data presented here attempt to assess the face validity of the measure using a method similar to that employed by Delprato (1975). A two question evaluation questionnaire was sent to all participants upon receipt of their career anchor profile. Questions were rated on a scale of 1-7 where 1 was strongly disagree and 7 was strongly agree. Table 5.13 presents the frequency of ratings for each question.

Table 5.13 Face validity frequency data

	The career anchor profile helped me to understand what is important to me in my career		It is beneficial for my line manager to understand my career anchors	
	Frequency	Percentage	Frequency	Percentage
1 s. disagree	2	1	6	4
2	0	0	7	5
3	3	2	17	12
4	13	9	32	22
5	44	31	39	27
6	63	44	26	18
7 s. agree	19	13	17	12

5.4.4.2 Construct Validity

A sample of 76 from three organisations completed the COI and Mantech's (1983) Work Values Questionnaire (WVQ). Correlations between the scales are shown in Table 5.14.

Table 5.14 Correlations between COI and WVQ subscales

	WR	IA	FWC	AC
GM	-.07	-0.29	-0.10	0.27
TF	.36	0.57**	0.32	-0.06
AU	-.13	-0.15	-0.22	0.59**
SE	-.01	-0.02	0.29	-0.14
CR	.27	0.42*	0.19	0.37*
SV	.52**	0.41*	0.21	0.18
PC	.52**	0.42*	0.32	0.34
LS	-.05	-0.29	0.01	-0.04

Key: *p<0.05, **p<0.01, ***p<0.001

5.4.4.3 Validity Summary

The face validity data presented here indicate that the majority of participants from this organisation found the career anchor profile useful and thought it would be useful for their manager to be aware of their career anchors. This indicates that these individuals believe that the COI is measuring something that relates to careers and may be useful in supporting their career development. It is important to remember that the participants may have rated their profiles favourably because of the Barnum effect; as such the results should be interpreted with caution (Delprato, 1975). Assessing validity after the participants have received their profiles makes it difficult to judge whether or not they are rating the validity of the measure or rating the validity of the model. This approach was used by Delprato (1975) but a more common approach is to ask participants to base their judgements regarding face validity on the questions not on the output from the questionnaire.

The construct validity results show significant correlations between the WVQ Work relationships subscale and the SV and PC career anchors. The work relationships subscale consists of values such as “contribution to society”, “fairness”, “harmony”, “feedback” and “recognition for doing a good job”. Significant relationships were also found between the WVQ influence and advancement subscale and the TF, CR, SV and PC career anchors. This subscale contains values such as “job status”, “advancement”, “personal growth”, “participation in decisions” and responsibility”. No significant relationships were found between the WVQ subscale financial and working conditions and any of the COI subscales (career anchors). This subscale contains values such as “pay”, “resources”, “work conditions” and “flexible benefits”. It could be argued that it would not be expected for these to relate to any of the career anchors. Finally, significant relationships were found between the WVQ subscale Autonomy and use of skills and the AU and CR career anchors. This subscale contains values such as “independence”, “autonomy” and “use of ability”.

5.5 Chapter Summary

The data presented in this chapter aimed to address the criticisms made in chapter 3 of previous research on the properties of the COI as a measure of career anchors. As a reminder, these criticisms were that research had been conducted on small

samples, restricted samples and samples from outside the UK. In addition chapter 3 highlighted the lack of evidence supporting the reliability and validity of the COI as a psychometric instrument. At the same time the data presented above aim to examine the stability of career anchors by considering the role of significant events. The final section of this chapter summarises the results of this study in relation to the specific hypotheses it sought to examine.

H5.1: The COI is a suitable measure of the career anchors proposed by Schein.

The data presented above provide satisfactory evidence for the eight factor structure as proposed by Schein (1992). Therefore this hypothesis can be accepted. The data from this sample suggest that the COI is a suitable tool for measuring career anchors. As indicated above this factor structure is not consistent with previous findings where factor solutions of between three and eleven have been found. This study uses an adapted version of the questionnaire used by Igbaria and Baroudi (1993). They found an 11 factor structure using this measure that they then reduced to nine using second order factoring. The nine anchors consisted of TF, GM, AU, CR, SV, PC, LS and the security anchor was split into two. No evidence was found here to suggest that the security anchor should be split. The full version of the COI employed in this study can be found in Appendix 5.

One possible reason for the eight factor structure found here is due to the sample. As discussed in chapter 3 previous samples have been small and/or restricted in range. The sample used here is large and taken from a wide range of organisations. This may have resulted in a wider range of responses resulting in a different factor structure. Alternatively, it could be argued that the questions in this version of the COI are repetitive and this could be one of the reasons for the eight factor solution that has been found. For example, see Figure 5.1 for the questions on the lifestyle scale. It could be suggested that questions eight and 24 bear many similarities and the same for questions 16 and 32. However, when considering internal consistency during the reliability analysis it was found that removal of any of these items caused a reduction in the coefficient alpha indicating that these questions are each contributing to the scale in question independently.

The eight factor structure as proposed by Schein (1993) was found in both groups of data analysed here. This provides acceptable evidence to accept H5.1.

Figure 5.1 – Questions from the COI Lifestyle scale.

8: Developing a life cycle that balances my career and family needs is...
16: Developing a career that permits me to continue to pursue my own lifestyle is...
24: Achieving work life balance between my family and my career is...
32: A career is only worthwhile if it enables me to live my life in my own way
40: Choosing and maintaining a certain lifestyle is more important to me than career success

H5.2: The COI exhibits acceptable reliability levels to warrant its description within this thesis as a psychometric test.

Two approaches to reliability were considered, internal consistency and test retest over a two week period. The internal consistency values reported above using Cronbach's alpha ranged from 0.59-0.83. Seven out of the eight scales demonstrated acceptable values of 0.7 or above for both data sets. The FE scale showed alpha levels of 0.59 and 0.60, both below the acceptable levels for internal consistency to be accepted. The questions from the FE scale in the version of the COI employed can be found in Figure 5.2. Question 25 was removed as it cross loaded onto the security scale but analysis of internal consistency showed that it reduced the reliability of the security scale. Therefore, a decision was taken to remove this item. The low values of internal consistency suggest that there is low reliability of measurement between the items in this scale.

This measure of internal consistency using Cronbach's alpha has long been recognised as the standard approach to examining the internal reliability of a psychometric (Nunnally, 1978). However it has been subject to criticism. Boyle (1991) questions the usefulness of this approach and argues that if the alpha coefficient is too high this suggests that this renders some of the items redundant. Cattell (1978) refers to this as bloated specifics and discusses the impact this can have on factor structures. The highest alpha level found within this study was 0.83,

which is not suspiciously high suggesting that bloated specifics are unlikely to have affected these data.

Figure 5.2 – Questions from the COI Functional Expertise scale

1: To build my career around some specific function or technical area is

9: Remaining in my specialist area as opposed to being promoted out of my area of expertise is

17: Remaining in my area of expertise throughout my career is

(25: I will accept a management position only if it is in my area of expertise)

33: I would rather leave my company than be promoted out of my area of expertise

The results of the test retest analysis over a two week period suggest that a good level of reliability exists for the measure, coefficients range from 0.68 to 0.89. The lowest coefficient was found for the FE scale. These findings are comparable to previous research on the COI (see Table 5.1) and to other similar measures (see Table 5.2). The results of the reliability analysis provide partial support for H5.2 with the exception of the FE scale.

H5.3: The career anchors measured by the COI may change more with extreme life or work experiences than without them.

The stability analysis indicates that career anchors do change when individuals experience certain life events. This finding is consistent with other writers' views on career and work values (Dose, 1997; Roberts, 1997). Schein himself proposed that significant changes in an individual's life might, in rare circumstances lead to changes in their career anchors although he felt that on the whole anchors were a stable construct. The data here from individuals who reported experiencing a change, whilst based on a small sample of 15, indicate that these changes to career anchors may be more common than Schein thought. The types of events that were reported are likely to happen to all of us at some point in time, possibly more than once (for example marriage, moving house, change job). Examination of these individuals' raw scores on the career anchor scales shows that they have all experienced a change of five points or more on at least one anchor. Examination of the remainder of this sample's scores did not show the same trend. This could mean

that our career anchor scores may change more than once in our lives raising questions about the model's stability. The findings from this study provide evidence to indicate that this is an area worthy of further exploration. This is considered in more detail in chapter 10 section 10.2.1.

H5.4: The COI will demonstrate an acceptable level of face and construct validity.

The first section of these data examine the face validity of the output of the COI. The results indicate that the majority of participants found the output from the COI useful and they also felt it would be useful for their line managers to be aware of this information. This suggests that they felt the COI had measured something to do with careers and their development. The approach taken to the measurement of face validity in this study makes it difficult to determine whether participants are validating the measure, the model or the output received. Despite this the data are encouraging for the use of the COI and the career anchor model as a framework for career development in organisations. As discussed in chapter 2 line managers are increasingly expected to play a role in the career development of their staff so an indication that participants believe the information from the career anchor model would also be useful to line managers is promising.

The second set of validity data examines the construct validity of the COI by comparing it to Mantech's (1983) Work Values Questionnaire (WVQ). Significant correlations were found between 3 out of 4 of the WVQ subscales and subscales of the COI. Examination of these correlations provides evidence for the convergent validity of the COI. For example SV was significantly correlated with the work relationships subscale of the WVQ which contains items relating to "contribution to society". TF was significantly correlated with the WVQ influence and advancement scale which contains items such as "job status" and "personal growth" finally, AU was significantly correlated with the WVQ subscale autonomy and use of skills which contains items such as "autonomy" and "independence". Evidence is also found for the discriminant validity of the COI as no significant correlations were found between any of the COI subscales and the WVQ subscale financial and working conditions. These data provide support for the construct validity of the COI in line with that found by Brindle and Whapham (2003b) in their comparison of the COI and Super's work values scale.

The data presented here concerning both face and construct validity provide support for H5.4 and suggest that the COI demonstrates acceptable levels of validity. As discussed the available validity data for the COI is limited so these data contribute to that already available but there is still a need for more research into the validity of the measure using larger samples.

The science of psychometrics is not exact. This leaves the researcher to base a number of decisions on their own particular knowledge and experience. The study reported here presents an empirical analysis of the COI as a measure of career anchors using a large, broad UK based sample of working adults. The sample is higher on female, 16-35 year olds and public sector workers than the labour force statistics so it cannot be said to be completely representative of the UK working population. However, in terms of analysis of the COI this is the first study of its psychometric properties conducted using a broad and varied Western sample. This study builds on previous research on the COI because of the nature of the sample used and the extensive consideration of reliability and validity. The following chapter continues to look at the data set gathered for the factor analysis (n=658) when examining the hypothesised prevalence of career anchors and the demographic differences in the distribution of career anchors across the sample.

Chapter 6

Career Anchor Prevalence

Chapter 6 Prevalence of Career Anchors

6.1 Introduction to chapter six

Chapter 5 provides evidence that supports the use of the version of the COI used here as a measure of career anchors. Building on this evidence, this chapter uses the now validated COI to measure career anchors and examine their prevalence within the current sample. The literature presented in chapters 2 and 3 suggest that many factors in the world of work are changing which has led to many re-evaluating their perceptions of work and careers. These changes are also having an impact on younger workers beginning their careers and are likely to result in generational changes in career values. This is likely to have an impact on the prevalence of certain career anchors within the current sample. Schein (1996) made a number of predictions about the way in which this prevalence may change as a result of the changing environments that careers now take place in (see Table 6.2). Ramakrishna and Potosky (2001) showed that there have been changes in the prevalence of certain anchors amongst information systems employees. The careers literature presented in chapter 2 also indicates that there are certain demographic differences in the way we view careers and the things that we want from them particularly in relation to age and gender (e.g. Gallos, 1989; Hakim, 2006). These differences could be highlighted using the career anchor model. Previous research has found such differences even within homogenous samples (Igbaria, Greenhaus & Parasuraman, 1991; Danizger & Valency, 2006). This chapter tests the hypotheses presented below. Firstly, the prevalence of each career anchor within the sample is examined and secondly the demographic differences (specifically gender and age) in the prevalence of career anchors is considered. Before the specific details of the studies are reported consideration of the theory behind the methodology employed is introduced.

H6.1 The prevalence of career anchors within the current sample will be different to that found by Schein in his original study. Typically it is expected that there will be an increase in numbers of people with LS and AU career anchors as predicted by Schein (1996).

H6.2: There will be significant differences between men and women in their scores on each of the career anchors as measured by the COI. More specifically the literature suggests that women will score higher on the LS career anchor and men on the PC, AU, GM career anchors.

H6.3: There will be significant differences between age groups in scores on each of the career anchors as measured by the COI. Typically, the literature suggests that younger age groups will score higher on the LS and SV career anchors and the older age groups will score higher on the GM and AU career anchors.

6.1.1 Introduction to MANOVA

A multivariate approach to the analysis has been taken due to the multivariate nature of H6.2 and H6.3 (Finch, 2005). In order to analyse the demographic differences, the subscales of the COI were entered as dependent variables (TF, GM, AU, SE, CR, SV, PC, LS) and the demographic categories of age and gender entered as independent variables. The advantage of taking a multivariate approach over a series of univariate analyses is the reduction of chance of Type 1 error caused by conducting multiple analyses on the same data set. In other words conducting multiple analyses on the same data increases the likelihood of finding a significant result. Despite this clear advantage over univariate methods MANOVA is a complex analysis that requires a considerable amount of data checking before the analysis can be conducted.

Field (2006) indicates that there needs to be a strong theoretical reason for including multiple variables in the analysis. Tabachnick and Fidell (2007) suggest that MANOVA works best when DVs are highly negatively correlated and acceptably well when DVs are moderately correlated. Ramsey (1982 in Field, 2006) found that as the correlation between DVs increased the power of MANOVA decreased. The correlation matrix of the career anchor scales was examined as these formed the DVs for the proposed analysis. This showed the highest correlation to be 0.49 and the lowest 0.15 with a mean correlation of 0.28. These correlations were deemed to be suitable for this analysis.

MANOVA requires the data to demonstrate both univariate and multivariate normality. Analysis of univariate normality showed that five out of eight DVs followed a normal distribution. However, GM, CR and LS did not and as such these variables

were initially transformed using the Log function. However, the process of transformation limits the interpretations that can be made from the findings. Tabachnick and Fidell (2001) suggest using a more stringent alpha level is more appropriate. Therefore, for interpretation of these scales an alpha level of 0.01 was used rather than the standard 0.05 and rather than using the transformed variables. Field (2006) indicates that it is not possible to examine multivariate normality using SPSS but that as univariate normality is necessary for multivariate normality this is the most practical way to assess this assumption. However it is important to note that it does not guarantee multivariate normality.

A second assumption for MANOVA is that the data have homogeneity of covariance matrices. Levene's test examines the equality of covariance matrices and Box's tests take account of the covariances. As such Field (2006) suggests that these should be examined together and should both be non significant. The data for this analysis did show violations for this assumption. Again, in this case Tabachnick and Fidell (2007) suggest that using a more stringent alpha level is appropriate. Therefore it was decided to use an alpha level of 0.01 for the whole analysis.

Finally it is important to choose the most appropriate test statistic to report the results of MANOVA. SPSS provides four statistics; Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root. Field (2006) states that these four statistics will only be the same when there is one underlying variate. Therefore, selection of the correct statistic can have a large impact on the presentation of results. Occasionally some of the statistics are significant while others are not (Tabachnick & Fidell, 2007). Field (2006) reports that all four statistics are relatively robust to violations of the assumption of multivariate normality. Olsen (1974 & 1979) recommends that Pillai's Trace is the most appropriate statistic for general use in MANOVA. Tabachnick and Fidell (2007) indicate that Pillai's trace is the statistic recommended for use when violations of assumptions have been found, therefore, this is the statistic that will be reported here.

6.2 Method

6.2.1 Procedure and sample

The COI was made available online using the website Survey Monkey, in paper format and via e-mail using an excel spreadsheet attachment. The first section of the

questionnaire was designed to collect demographic details of the participants, specifically, gender and age group. Data were gathered from approximately 27 UK based organisations. The demographic details of the sample are presented again below in Table 6.1.

Table 6.1 Chapter 6 analysis sample: demographic details (n=658)

Variable	Frequency	Percentage	Percentage of UK Labour force statistics (2006)
Gender			
Male	244	37.1%	53%
Female	414	62.9%	47%
Age			
16-25	148	22.5%	14%
26-35	256	38.9%	29%
36-45	147	22.3%	31%
46-55	74	11.2%	15%
56+	33	5.1%	11%
Education			
GCSE	86	13.1%	Not available
A-Level	145	22.1%	Not available
Degree	226	34.3%	Not available
Postgraduate	170	25.8%	Not available
Doctorate	31	4.7%	Not available
Job Level			
Clerical	92	13.9%	Not available
Manual	41	6.2%	Not available
Professional	363	55.2%	Not available
Junior Manager	82	12.5%	Not available
Middle Manager	63	9.6%	Not available
Senior Manager	17	2.6%	Not available
Organisation Type			
Private Sector	390	59.3%	79%
Public Sector	268	40.7%	21%
Police/Non Police			
Police	136	20.7%	Not available
Non Police	522	79.3%	Not available

Table 6.2 Schein's predictions for changes in the popularity of career anchors

6.3.1 Distribution of Career Anchors

Schein (1996) hypothesised that the most popular career anchors held by individuals were likely to have changed from his original research. In his original work he found approximately 25% of the sample were anchored in general management, 25% in functional expertise, 10% in autonomy, 10% in security and 30% spread evenly

among the remaining four career anchors. It is important to be aware that the original sample consisted of all male, MIT graduates as outlined in chapter 3, so this cannot be said to be a representative general sample of the population.

As discussed in chapter 3, in 1996 Schein hypothesised that certain changes would be seen in the way career anchors are distributed. These predictions are summarised in Table 6.2. To summarise, Schein (1996) predicted an increase in the number of individuals exhibiting the following primary career anchors: AU, LS, PC, and an increase in SV as a primary anchor for young workers. The following sections describe the analysis of highest and lowest scoring anchors within this sample.

6.3.1.1 Highest Scoring Anchors

The data from this study (n=658) were examined using the crosstabs function in SPSS to determine the frequencies of primary anchors. The method used by Yarnall (1998) was applied here to determine the primary anchor that is, the primary anchor is taken to be the highest scoring anchor for each individual. In this case if there are two anchors with the same highest score, the number of items within that scale with the highest rating was considered to determine the highest ranked anchor. The findings are summarised in Table 6.3 alongside results of previous studies.

6.3.1.2 Lowest Scoring Anchors

When commenting on Holland's RIASEC model, Arnold (2004) suggested that looking at the values that individuals have low scores on can be just as valuable as looking at those that are high scoring. These scores could indicate areas or types of work that individuals may need to consider avoiding. In Holland's model a three letter code is created for an individual consisting of their highest scoring scales. With career anchors Schein (1978) believed that only the primary anchor should be considered as this is the one thing that an individual will not give up when making career decisions. More recently Schein (2006) has suggested the importance of considering an individuals' scores on all eight anchors. Therefore a decision was taken to examine lowest scoring anchors at the same time as looking at the highest scoring. The lowest scoring anchor for each individual was examined and the percentages are displayed in Table 6.3. The same process was used as that for determining highest scoring anchors. In the case of tied scores, the number of items

within that scale with the lowest ranking was used to determine a lowest scoring anchor.

Table 6.3 Percentages of highest and lowest scoring anchors for each participant from this and previous studies

Anchor	Highest scoring - this study (n=658)	Schein (1985) a	Igbaria and Greenhaus (1991)	Yarnall (1998)	Marshall and Bonner (2003) b	Lowest scoring – this study (n=658)
TF	15.5	30.2	22.6	31.0	26.0	4.3
GM	2.1	27.0	26.1	6.0	14.0	41.1
AU	8.9	11.1	14.7	3.0	33.0	5.2
SE	10.2	9.1	6.5	15.0	11.0	7.0
CR	5.8	7.7	4.7	3.0	23.0	25.0
SV	13.2	5.5	8.2	5.0	32.0	7.3
PC	6.2	2.9	6.7	14.0	38.0	6.2
LS	38.1	1.9	10.5	23.0	53.0	3.9

This table is adapted from Danziger and Valency (2006)

a - these figures are taken from an average of 14 studies (n= 14-41), within which 4.9 percent indicate an unclear career anchor.

b - this study allows for more than one dominant anchor therefore the cumulative percentage is greater than 100.

6.3.1.3 Summary

It can be seen from Table 6.3 that the most common primary anchor for the current sample was lifestyle, held by 38% of the sample. Comparing this to the other studies shown in Table 6.3 the prevalence of the lifestyle anchor seems to have become more common in recent years increasing from 1.9% in Schein's 1985 sample to 10.5% (Igbaria and Greenhaus, 1991) to 23% (Yarnall, 1998) to 53% (Marshall and Bonner, 2003) and 38% in this study. In this study LS is also the least frequently occurring lowest scoring anchor with only 4% having it as their lowest scoring. This increase is in line both with Schein's predictions but also with the trends discussed in chapter 2 that suggest lifestyle factors are becoming more important to individuals when considering their career.

General Management was the least frequently occurring primary anchor which compared to previous work (Table 6.3) suggests its prevalence seems to be decreasing from 27% in Schein's (1985) study to 26% (Igbaria and Greenhaus, 1991) to 6% (Yarnall, 1998) to 14% (Marshall and Bonner, 2003) to just 2% in the study reported here. Interestingly when examining the prevalence of lowest scoring anchors GM is the most frequently occurring with 41% of the current sample having this as their lowest scoring anchor. Schein predicted that the need for the general management anchor would increase and be seen at lower levels of organisations. The findings presented here cannot support or refute this prediction but they suggest that if there is an increase in demand for individuals with this anchor it is unlikely to be met. However, it may be that if general management skills are now being utilised at different levels of the organisation and the general management career anchor needs to be reconceptualised to make sure it is still relevant. Currently the way this anchor is operationalised by the COI makes it strongly linked to senior, general management roles. This is illustrated by considering question 10 on the COI; "To be in charge of a whole organisation is..." (see Appendix five).

Schein also predicted that there would be an increase in the number of individuals with autonomy and pure challenge as their career anchor. No evidence of this was found in this sample. However it is important to remember that this study is only looking at individuals' primary anchors. It may be that the mean scores of individuals on both autonomy and pure challenge have increased. Unfortunately the data are not available to allow this comparison to be made.

It has to be noted when making comparisons between the studies reported in Table 6.3 that the samples used within each study are not matched. This places significant limitations on the interpretability of these findings and whether or not it can be said that real increases or decreases in prevalence have occurred. The combined figures from Schein's research (1985) are taken from an average of 14 studies using samples of people in a variety of occupations (n=14-41). Igbaria and Greenhaus (1991) use only IS professionals (n=464), Yarnall (1998) uses individuals from one organisation in the UK (n=374) and Marshall and Bonner (2003) uses a graduate sample (n=423). The study by Marshall and Bonner (2003) also allowed individuals to have more than one career anchor which will may inflated the prevalence of some career anchors among the sample. Despite this it could be argued that these findings indicate some level of support for Schein's predictions concerning the LS

anchor as these findings are also supported by the literature described in chapter 2 on the changing face of careers.

6.3.2 Demographic Differences

Research into career values indicates that there are certain demographic differences that exist. These are empirically examined here in relation to career anchors. The demographics gathered for this data set were gender and age. Many authors have discussed the role of gender in shaping our career aspirations and the differences that can be found between men and women and their career narratives (Gallos, 1989; Hakim, 2006; Crowely-Henry & Weir, 2007). The lifespan approach to the study of careers described fully in chapter 2 indicates that there might also be age differences in the way careers are viewed and in the factors individuals want from their careers (e.g. Super, 1957; Levinson, 1978; Schein, 1978; Greenhaus, 1987). A full discussion of this literature can be found in chapter 2. The specific hypotheses to be examined here are:

H6.2: There will be significant differences between men and women in their scores on each of the career anchors as measured by the COI. More specifically the literature suggests that women will score higher on the LS career anchor and men on the PC, AU, GM career anchors.

H6.3: There will be significant differences between age groups in scores on each of the career anchors as measured by the COI. Typically, the literature suggests that younger age groups will score higher on the LS and SV career anchors and the older age groups will score higher on the GM and AU career anchors.

MANOVA was used to assess both hypotheses together. Age and gender were used as independent variables and the career anchor subscales as dependent variables. Table 6.4 shows the means, standard deviations and F ratios for each subscale (anchor) for the whole sample and the means for each subscale broken down by gender and age. From this it is clear that there are some differences in mean scores between different demographic groups.

6.3.2.1: Gender differences

Significant differences were found for the main effect of gender, $F(8,641) = 4.146$, $p < .001$, Pillai's Trace = 0.049. Specifically differences were found on the subscales,

GM [$F(1,648) = 13.728, p < .001$], CR [$F(1,648) = 5.281, p < .002$], PC [$F(1,648) = 10.452, p < .001$] and LS [$F(1,648) = 15.19, p < 0.001$]. Examination of the means indicated that the average scores on GM, CR and PC were higher for males than for females. For LS the average score was higher for females than for males.

6.3.2.2: Age differences

Significant differences were found for the main effect of age, $F(32,2576) = 1.96, p < 0.001$, Pillai's Trace = .095. Specifically differences were found for the subscales, GM [$F(32,2576) = 4.52, p < .001$], CR [$F(32,2576) = 3.53, p < .007$], PC [$F(32,2576) = 4.01, p < .003$] and LS [$F(32,2576) = 2.30, p < .01$]. As there were more than two levels of independent variable these results were followed up using four one-way ANOVAs. Post hoc tests using Tukey HSD showed significant differences only between certain groups these are summarised in Table 6.5.

6.3.2.3 Gender and age interactions

A significant interaction effect was found between age and gender, [$F(32,2576) = 3.02, p < 0.001$, Pillai's trace = .145]. This indicates that the male and female scores on the COI subscales varied differently through the age groups used in the analysis. Significant interactions were found for the subscales, GM [$F(2,648) = 3.16, p < 0.01$] and SV [$F(2,648) = 3.21, p < 0.01$]. Plots of these interactions are shown in figures 6.1 and 6.2.

Table 6.4 MANOVA results for age and gender differences in career anchor scores

	Gender					Age										
	Male		Female		F	16-25		26-35		36-45		46-55		55+		F
	M	SD	M	SD		M	SD	M	SD	M	SD	M	SD	M	SD	
TF	20.23	3.98	20.11	4.46	1.11	20.43	5.12	20.25	3.95	19.56	4.17	20.51	3.91	20.15	3.95	1.10
GM	15.03	4.70	13.90	4.87	13.73***	15.60	5.07	14.40	4.40	13.79	4.80	12.86	5.44	13.48	4.48	4.52***
AU	18.78	4.31	18.96	4.96	2.54	18.86	4.50	19.33	4.19	18.15	4.99	19.38	5.56	17.85	5.91	2.12
SE	19.71	4.54	19.75	5.01	1.67	20.05	4.58	19.13	4.76	19.89	5.03	20.78	5.23	20.00	4.44	1.85
CR	15.67	5.18	15.11	5.27	5.28**	15.95	5.50	15.89	5.10	14.40	4.97	14.30	5.32	14.27	5.35	3.53**
SV	19.52	5.28	20.34	5.16	018	19.87	5.11	20.77	5.00	19.23	5.01	19.85	5.98	19.00	5.90	1.47
PC	18.45	4.67	17.34	4.44	10.45***	18.24	4.73	18.27	4.22	17.09	4.65	16.60	4.64	17.36	5.05	4.01**
LS	20.64	5.02	22.38	5.36	15.19***	20.67	5.71	22.32	5.16	21.48	5.10	22.41	5.09	21.67	5.30	2.30*

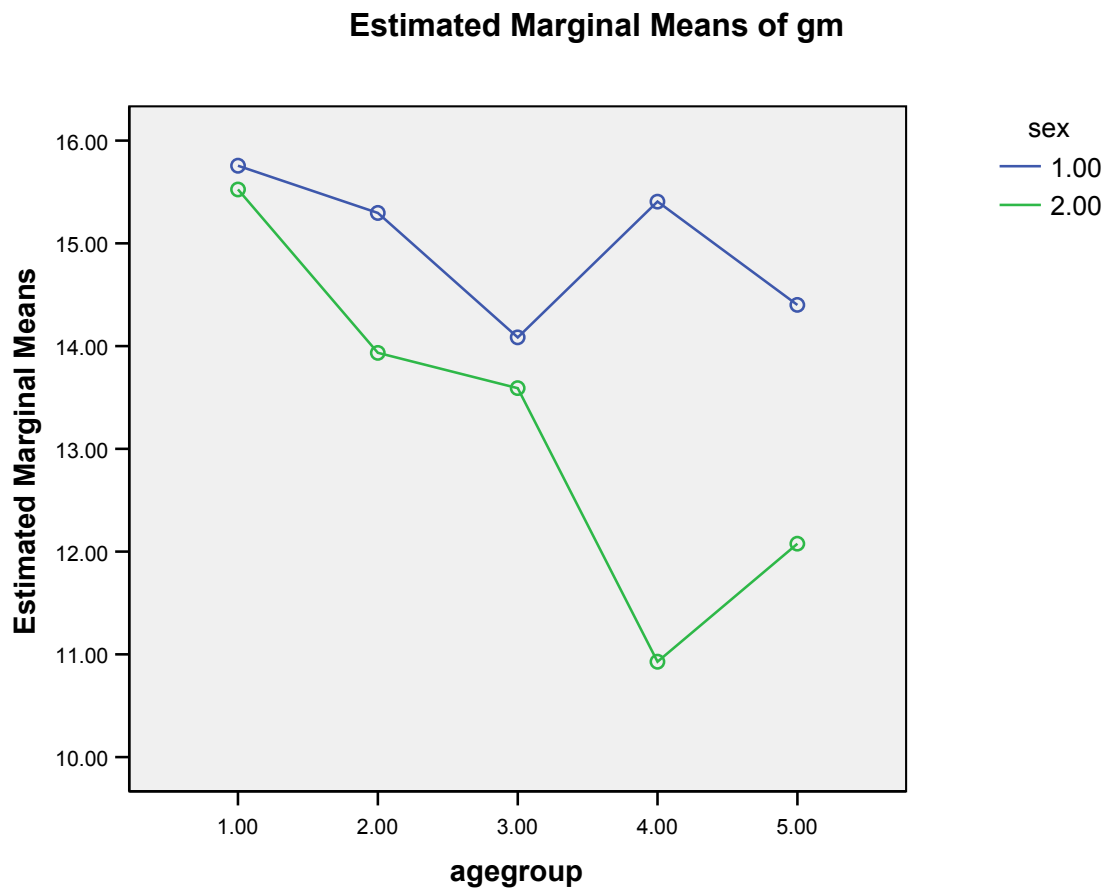
Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6.5 Post hoc tests for age differences in career anchor scores

	16-25				26-35				36-45				46-55			
	GM	CR	PC	LS	GM	CR	PC	LS	GM	CR	PC	LS	GM	CR	PC	LS
16-25																
26-35	.112	.998	.907	.022*												
36-45	.011*	.079	.189	.533	.727	.046*	.090	.531								
46-55	.001***	.165	.080	.998	.106	.136	.041*	.731	.655	.996	.938	.372				
56+	.148	.445	.851	.866	.837	.441	.816	.967	.996	.902	.938	.963	.972	.876	.927	.986

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 6.1 Gender and age interactions on the GM subscale



Key: 1 = males, 2 = females

Age group 1 = 16-25

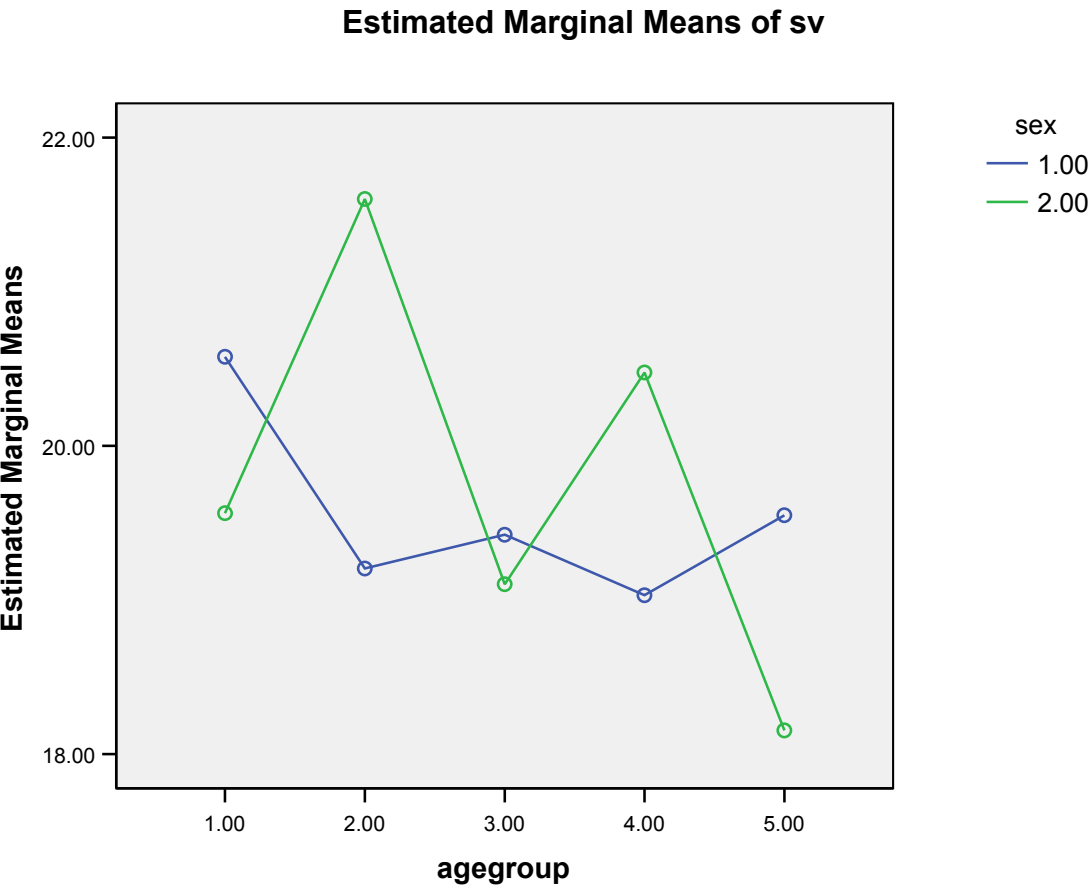
Age group 2 = 26-35

Age group 3 = 36-45

Age group 4 = 46-55

Age group 5 = 56+

Figure 6.2 Gender and age interactions on the SV subscale



Key: 1 = males, 2 = females
Age group 1 = 16-25
Age group 2 = 26-35
Age group 3 = 36-45
Age group 4 = 46-55
Age group 5 = 56+

6.3.2.4 Summary of demographic differences

The data analysis shows that within this sample men scored higher on GM, CR and PC while women scored higher on LS. This finding in relation to the GM and LS scales is consistent with previous literature on gender differences in careers. Possible reasons for the differences found in CR and PC are discussed in section 6.4. No significant gender differences were found for TF, AU, SE or SV.

The data show significant age group differences on the same anchors GM, CR, PC and LS. Examination of the post hoc analysis showed that these differences were only between certain age groups making it difficult to interpret as no consistent significant linear trends were found. Examination of the mean scores (see Table 6.3) shows that mean score for CR seems to decrease with age group. However significant differences were only found between the 26-35 and 36-45 age groups. No significant age differences were found for TF, AU, SE or SV.

Gender and age interaction effects were found for two of the anchors, GM and SV. This suggests that men and women vary on this anchor differently across the age groups. Inspection of the interaction plots suggests that for GM the difference comes between the age groups 36-45 and 46-55. Women in the 46-55 age group show much lower GM scores than those in the 36-45 group and men in the 46-55 age group show higher GM scores than those in the 36-45 age group. The gap between men and women's scores in the 46-55 age group is much larger than for any other age group. Up until this age group the differences are much smaller. For the 56+ age group there is still a large difference between scores for men and women but it is smaller than for the 46-55 age group. For SV the difference in the women's age groups are more variable. Whereas there is a big difference for men's scores between those in the 16-25 age group showing much higher SV scores than those in the 26-35 age group. Schein predicted that the SV anchor would become more prevalent for young workers, this prediction seems to be supported for women in the 26-35 age group but less so for men. The differences between the genders in the SV anchor are most pronounced for the 26-35 age group.

When considering these age differences and the interactions consideration must be given to the fact that these data were not collected as part of a longitudinal study. Therefore when, for example, the interaction graphs show a decline in GM scores for

women at age 46-55 this does not take into account what these women's score was at age 36-45. It may have been the same, what these differences could be representing are generational differences in career values rather than changes through the lifespan. This is discussed further below.

6.4 Chapter Summary

This chapter has examined the distribution of career anchors across a broad sample and examined demographic differences by considering both age and gender. A summary of findings by career anchor can be found in Table 6.6. Consideration of these findings in relation to the hypotheses stated at the start of this chapter are made in the final section of this chapter.

Table 6.6 Summary of Career Anchor Prevalence and Demographic Differences

Career Anchor	Comments
Functional Expertise	2 nd most frequently occurring primary anchor 2 nd lowest ranked anchor
General Management	Least frequently occurring primary anchor. Most frequently occurring lowest ranked anchor Gender differences found with men scoring significantly higher than women Age differences between 16-25 and 36-45 and 46-55. An interaction effect between age and gender was found.
Autonomy	None
Security	None
Creativity	2 nd least frequently occurring primary anchor 2 nd most frequently occurring lowest ranking anchor Significant age differences were found between 26-35 and 36-45.
Sense of Service	An interaction effect between age and gender was found.
Pure Challenge	Significant gender differences were found with men scoring higher. Significant differences in age were found between 26-35 and 46-55.
Lifestyle	Most frequently occurring primary anchor Least frequently occurring lowest ranked anchor Significant gender differences found with women scoring higher. Significant age differences were found between 16-25 and 26-35.

H6.1 The prevalence of career anchors within the current sample will be different to that found by Schein in his original study. Typically it is expected that there will be an increase in numbers of people with LS and AU career anchors as predicted by Schein (1996).

The prevalence of career anchors found within this sample is different to that found by Schein in his original study so some support has been found for H6.1. The main changes were increases in LS and decreases in GM. However, as discussed above it is important to remember that the samples are not matched making it difficult to comment on any meaningful comparisons between studies. What the data do indicate is that Schein's (1996) prediction that more people will be seen with the career anchor of lifestyle seems to be supported. Chapter 2 discussed the presence of constant change in the workplace and the impact this has on individuals' careers. It is likely that this change will affect perceptions of careers and career values (Niles & Goodlough, 1996). The recent global recession is likely to have an impact on what it is that people want from work and to impact upon both work and life values. Whilst acknowledging the limitations of making comparisons between these data and those taken from other non matched samples there does appear to be an increase in the number of individuals with lifestyle as their primary anchor (see Table 6.3) and this is in keeping with the workplace trend towards workplace well being and work life balance (Carless & Wintle, 2007). This indicates, perhaps, that despite Schein's belief in the stability of career anchors they can be affected by external factors as discussed in chapter 5. This is in line with research into the stability of values (Hagstrom & Kjellberg, 2007; Steyn & Cotzē, 2004).

In considering the possible increase seen in the LS anchor and the possible decrease in the GM anchor it is important to consider the potential impact of sampling bias. The current sample is skewed as it includes a higher percentage of women and a higher percentage of public sector employees than is found in the overall UK working population. Considering the literature presented in chapter 2 concerning gender differences in work and career values, the high number of women in the sample could have contributed to these findings.

These data were also used to examine the prevalence of lowest scoring anchors and found GM and CR to be the most frequently occurring. It could be suggested that this indicates that the role of general manager or the need to exhibit entrepreneurial creativity as defined by Schein (1978) is not as important as other factors to the

current sample when making career decisions. Heslin (2005) reports that a study of MBA graduates indicated that two thirds did not follow the prototypical career path of managerial promotion. Similarly a recent survey of senior executives in Fortune 1000 companies found that 60% stated they had no desire to hold the CEO's position. This supports the notion that the GM anchor may need to be reconceptualised as discussed above. When considering recent data on the number of small business start ups however the high prevalence of the CR anchor, as lowest scoring seems to be contradictory to statistics that suggest the number of business start ups is continuing to increase. The reason for its high prevalence as a lowest scoring anchor in this sample is likely to be due to the fact that all participants were employed in UK based organisations. Entrepreneurs and small business were not targeted during data collection. If they had been, this may have had an impact on the results found.

H6.2: There will be significant differences between men and women in their scores on each of the career anchors as measured by the COI. More specifically the literature suggests that women will score higher on the LS career anchor and men on the PC, AU, GM career anchors.

H6.3: There will be significant differences between age groups in scores on each of the career anchors as measured by the COI. Typically, the literature suggests that younger age groups will score higher on the LS and SV career anchors and the older age groups will score higher on the GM and AU career anchors.

Partial support was found for both these hypotheses as significant differences were found for the GM, CR, PC and LS anchors between genders and between certain age groups. It is interesting that differences found between the genders and between age groups relate to the same four career anchors. This suggests that these anchors vary more systematically between individuals whereas the TF, AU, SV and SE anchors could be said to vary more randomly. Within this sample men scored higher on GM, CR and PC while women scored higher on LS. The findings for GM and LS are in line with previous research into the differences in male and female career values (e.g. Hakim, 2006; Huang & Sverke, 2007). The reasons for gender differences being found in CR and PC are however less clear from previous research into career values. The CR anchor is associated with a desire to build

something of ones own so could be said to be associated with entrepreneurs. Research shows that the characteristics of entrepreneurs were more commonly associated with males than with females (Gupta, Turban, Wasti & Sikdar, 2009). Despite this Bennett and Dann (2000) report that more women than men in both the UK and Australia report being self employed, but it could be that they choose this type of employment for other reasons perhaps to give greater work life balance or to exhibit functional expertise in a particular area. In relation to the PC anchor defined as a constant need for challenge and competition in the workplace, men are traditionally viewed as more competitive than women both at work and socially (Gneezy & Rustishini, 2004). Hakim (2006) reports that whilst there is no solid evidence of cognitive differences between men and women there is evidence to suggest a difference in the value of competitiveness, where men place a higher value on competitiveness than women. This may be being reflected in the career anchor scores.

When considering the age differences that were found Schein (1996) predicted that the need for autonomy would increase with age, no support for this prediction was found from the analysis reported here. He also predicted that there would be an increased need for sense of service from work among young people. Again this was not supported through the analysis conducted here. However, significant differences were found in scores on the GM anchor with the 16-25 age group scoring significantly higher than the 36-45 age group and significantly higher than the 46-55 age group. The literature on career success presented in chapter 2 indicates that need for objective career success based on factors such as status declines with age. This may be being reflected in these career anchor scores. However, no other significant differences between age groups were found. This finding is difficult to interpret as no linear trend between the age groups can be seen. It may be that the idea of general management is appealing in early career but that experience of work may open up other career possibilities. Alternatively the pursuit of general management in early career may bring with it a greater understanding of what it entails and once people achieve management roles they may decide to move out of them.

Significant differences were also found in the CR anchor with 26-35 year olds scoring higher than the 36-45 age group. No linear trend in significant differences was found. However, examination of the means presented in Table 6.4 shows that these

decrease steadily from the 16-25 age group to the 55 + group suggesting a gradual decline in the need for CR from this sample across the age groups.

Also in the PC anchor, 26-35 year olds were found to score higher than the 46-55 age group. These findings again do not show a linear trend.

Lastly significant differences in scores on the LS anchor were found between the 16-25 group and the 26-35 age group with the 26-35 group scoring higher. The LS anchor refers to the need for balance between work and life activities and demands. It could be suggested that this need is higher in the 26-35 age group than the 16-25 age group because the combination of work and lifestyle demands at this age is likely to be higher.

Significant interactions were found for the SV and GM anchors, again no clear linear trends were found but this does suggest that males and females vary different on these anchors. However, these age differences have not been gathered in a longitudinal study. Therefore it is not possible to conclude that career anchor values vary across the lifespan. All that can be concluded from these data is that within the current sample there are age differences in the scores on certain career anchors. These differences may represent generational differences in career anchors scores rather than actual changes in scores across the lifespan. If this was the case it could be suggested that changes affecting perceptions of both life and work may cause changes in the career needs of different generations. This is consistent with previous research into generational values. Smola and Sutton (2002) suggest that generational experiences influence work values while Westerman and Yamamura (2007) found generational differences significantly impact upon employee attitudes.

This chapter provides evidence that suggests a shift in career anchor scores towards LS and away from GM. In addition evidence for both gender and age differences within the current sample on some of the career anchors has been shown. So far the empirical data presented in this thesis have produced evidence to support the use of the COI as a measure of career anchors, suggested that some anchors occur more commonly than others and found gender and age differences in the distribution of career anchors across the current sample. These findings provide the foundations for the congruence studies. They have validated a measure of career anchors and highlighted possible value shifts and demographic differences that could aid organisation's career planning and management systems. The next part of this

research builds on these foundations, firstly by examining if and how career anchors could be matched to jobs and secondly by exploring the relationship between career anchors, congruence and work related outcomes.

Chapter 7

Police Context

The data reported in chapters 5 and 6 were gathered from a variety of UK based organisations. Chapters, 8 and 9, examine the relationship between congruence, career anchors and work related outcomes. For these studies the data were gathered from one UK police force. As described in chapter 1, this police force part-funded the research and will be referred to as the host organisation from this point forward. This chapter provides an introduction to the culture of the UK police service generally, describes the group of staff this research focuses on and explains the way their careers are managed. Skolnick (2005) describes the culture of the police service as unique and different to that found in any other type of organisation. An appreciation of this culture is deemed to be important as this may have an impact on the congruence studies reported in chapters 8 and 9.

7.1 The UK police service

The police service is a public sector organisation governed by the Home Office. At the time of writing there are 43 police forces in the UK (with the exception of Scotland which is run independently). A chief constable manages each force locally. Berry, Izat, Mawby, Walley and Wright (1998), comment that as a public sector organisation, the public feel they have a right to understand how police organisations run. Increasingly the public want to know that they are run fairly, that high standards are adhered to and that these organisations run efficiently, thus not wasting public monies. This has a significant impact on the way in which these organisations are run.

The UK police service consists of approximately 142,000 police officers and 72,000 police staff, of whom 6214 are community support officers (CSOs). These figures distinguish between the two types of employee found within the service, police officers and police staff. Officers are the most commonly thought of employees of the service. They carry out a range of visible functions such as policing the streets and staffing armed response vehicles as well as less visible roles including forensic investigations and training. Police officers all join the service in the rank of constable. During their career they can choose to stay at this rank, progress up through the ranks or to specialise in one particular area of policing for example criminal investigation (CID). There are certain elements of the job that clearly distinguish

police officers from police staff. For example officers have powers to arrest individuals and are required to attend emergency incidents such as terrorist attacks. The process for rank progression is clear and widely advertised. Officers complete the assessment for promotion and if successful, when a vacancy arises they are eligible to apply. Some promotions procedures are the same nationwide, for example constable to sergeant, others, particularly more senior promotions, are assessed locally in force. The individual officer requests lateral moves into specialist areas of policing and the process is more informal.

The data gathered for analysis in the remainder of this thesis are taken from police staff. Research conducted on police staff is extremely limited, as such this research provides a novel opportunity to explore the needs of these staff.

7.1.1 Police Staff

Police staff are “civilians”. They do not have the detention and arrest powers of police officers and they do not all join the organisation at the same level. Instead, police staff are recruited to a particular role in much the same way as employees in any other organisation. The roles carried out by these staff cover a wide range of functions but this has not always been the case. Berry, Izat, Mawby, Walley and Wright (1998), describe four stages of civilianisation and the development and increase in the number of police staff roles:

1. Manual functions such as cleaning and catering (pre 1939)
2. Administrative/clerical support functions (1939-1966)
3. Administrative and specialist – such as scenes of crimes officers, fingerprinting functions (1966 onwards)
4. Professional functions such as financial/accounting IT, personnel specialists (1988 onwards) (p. 233).

The number of police staff in the UK has increased rapidly since the police officer pay awards made by the Conservative government in the 1980s (Berry et al, 1998). At this time police staff became a more economical option as police officer pay had increased significantly. This caused forces to look more closely at police officer roles to examine whether they really needed to be carried out by an officer or whether a member of police staff could carry them out. The head of training and development

within the host organisation suggested there are now three distinct groups of police staff. These are:

1. **Operational police staff** – those who closely support police operations and work in police specific functions. For example communications operators who answer emergency calls and are involved in deploying officers to crime scenes or fingerprint technicians who conduct forensic work to aid police investigations. Individuals in these roles work very closely with police officers.
2. **Support police staff** – those who carry out roles to aid the functioning of the organisation. For example in finance, human resources and administration. These roles can be found in most organisations and do not necessarily require specific police knowledge. As such the careers of individuals in these roles are not necessarily tied up with the police service.
3. **Para-Professional police staff** – these are the most recent group and could be described as members of police staff who carry out roles that are vital to and directly related to operational policing roles, for example community support officers (CSOs). Individuals in these roles have often been attracted to the police service and have joined with the intention of having a long term career within the organisation.

The police staff employed within each force do not have a rank structure as police officers do. Instead they have a grade structure similar to that found in most public sector organisations. However, within the host organisation, the pathway for progression across and between grades is not clear. Each job has a separate role profile and when a police staff vacancy arises it is always advertised externally at the same time as internally. Any existing member of police staff wishing to apply for a vacancy must undergo a full recruitment procedure alongside applicants from other organisations. As will be evidenced later in this chapter this process has an impact on the way in which careers are viewed by police staff. This is however, something that the police service is trying to address through strategies such as workforce modernisation, described next.

7.1.2 Workforce Modernisation

The government white paper on police reform (Blunkett, 2001) recommended that a number of roles, traditionally carried out by police officers, should be civilianised, i.e. be carried out by police staff. There are approximately 70,000 police staff employed

in the UK, (Loveday, 2005), and these numbers are continuing to rise due to the civilianisation of roles. Sir John Stevens, commissioner of the metropolitan police from the year 2000 to 2005, called for a 50-50 split in the numbers of police officers and police staff across the service in the near future. (Met Chief calls for 50-50 police service, 2004). The host organisation has approximately 4,000 employees, 2,400 police officers and 1,600 police staff, approximately a 60:40 split. Two thirds of the department heads were officers and one-third were police staff. The main aim of police reform is to make better use of the resources within the police service, thus becoming more cost effective and to ensure people are in the right roles to utilise their skills.

One of the ways in which police reform is attempting to address this is through the workforce modernisation plan. This aims to produce a clear organisational structure combining officers and staff within a single framework. Whilst this sounds relatively straightforward a number of barriers have been identified, including unclear career pathways for police staff (National Workforce Modernisation Programme, 2007). Considering the wide variety of roles conducted by staff and the wide variety of experiences each member of police staff brings with them, organising these roles into a coherent clear structure is not an easy task.

Dick and Metcalfe (2001) report that a double standard in provision is perceived to exist between police officers and police staff, with officers perceived to be getting the better deal, especially in terms of career development. As more roles become civilianised and the numbers of police staff increase many of the distinctions between officers and staff are reducing (Reuss-Ianni & Ianni, 2005). As mentioned in chapter 4, a review of the academic literature quickly shows that the research community has largely ignored issues concerning police staff. There are a number of papers on various issues relating to officers including career development but only one was found that uses a police staff sample and this considers organisational commitment (Dick & Metcalfe, 2001). The research presented in chapters 8 and 9 provides some insight into this group. The changes being brought about through workforce modernisation should provide a platform for more research to be conducted on this increasingly large group of staff to gain a greater understanding of their unique needs.

7.1.3 Impact of changes to the career concept

When considering the changes that have occurred in the world of work as described in chapter 2, it is important to draw distinctions between public and private sector organisations. Processes such as delayering have had a far greater impact on private sector organisations. To date redundancies are still relatively rare in the public sector meaning they are able to offer a higher level of job security to their employees than organisations in the private sector. However, at the time this research was conducted the Rt. Hon. Charles Clarke as Home Secretary proposed that police forces in the UK should be regionalised. The proposal aimed to create 12 regional forces to replace the 43 locally run forces (Plan to cut police forces to 12, 2005) with the aim of improving the country's capabilities in relation to terrorism, serious organised crime and public disorder (Flynn, 2007). These proposals would, almost certainly, have led to redundancies in the service particularly among the more senior ranks and roles (Fuller, 2006). If this had gone ahead it would have caused a major change in police service employment and had a significant impact on the psychological contracts that exist between staff and employers. At the time of writing a new home secretary has been appointed and the talks of regionalisation have been postponed for the time being. However, it is important to be aware that the proposal impacted on views of careers within the service at the time the data for this research were gathered. The issues of increased diversity discussed in chapter 2 have also been seen in the police service.

7.2 Police staff career development – existing practices

In recent years the police service seems to have focused on increasing the numbers of their civilian workforce with no strategy for their career development (Berry et al., 1998). This has resulted in a limited career structure for police staff. Instead individuals are recruited to do a specific job, and little consideration is made of career paths and development issues.

7.2.1 National Schemes

The host organisation does offer some national initiatives related to career development that are available to police staff. These include;

- National Senior Careers Advisory Service (NSCAS)

This is available for officers and staff of superintendent rank (or equivalent) and above. The service offers web-based self-assessment tools and access to development advisors for employees who have the potential to rise to very senior roles in the organisation.

- High Potential Development Scheme (HPD)

The aim of the scheme is to identify and develop individuals with the potential to become leaders in the police service. It is intended that the scheme will be made available to both police officers and staff but is currently under review.

- Core Leadership Development Programme (CLDP)

This programme provides participants with the option of studying for a recognised management qualification at one of three levels; it is open to both officers and staff. The qualifications are recognised by the Institute of Management. At the time this research took place this scheme was just being introduced within the host organisation. Initially it was being rolled out to police officers with plans for it to be available to police staff in the next stage.

It can be seen from the overview of these nationwide schemes that there is a heavy focus on vertical career progression and as an organisation it would appear to be viewing careers in a traditional sense.

7.2.2 Issues with police staff career development

As discussed in chapter 2 organisations are increasingly taking a hands off approach to career development and leaving it to individuals to manage their own careers. However, as Baruch (2004) discusses, careers are almost always played out in an organisational setting and research conducted by Crawshaw (2006) suggested that the majority of employees believe that line managers should be responsible for the career development of their staff. Initial discussions with the head of training and development at the host organisation indicated that the lack of structure for police staff careers was not just a problem faced by this force. Instead, it was something he felt other forces would be looking to address in the future. As a result the views of those responsible for police staff career development within the host organisation and other police forces were sought via initial discussions with the researcher. It was hoped this would give some insights into whether a model like career anchors could be useful in providing a structure for police staff careers.

These discussions revealed three main issues that act as a barrier to creating a framework for police staff career development; the large variety of roles they carry out, the fact that police staff are recruited for a specific role and therefore have a wide variety of previous experiences rather than a generic skill set and finally the fact that many roles are not police specific meaning that some staff prefer to specialise in their functional area than to have a police specific career. When considering current provisions for police staff careers, these discussions revealed that in most cases there are no career paths or succession planning for police staff, where these do exist they are within specific departments or for certain identified staff. It also appears that forces experience problems with retention of police staff, particularly staff identified as high flyers, due to lack of career development opportunities. Some staff mentioned the concept of double standard identified by Dick and Metcalfe (2001), stating that a double standard exists between police officers and police staff when it comes to career development.

The discussions with the staff responsible for police staff career development paint a bleak picture of the career paths of police staff. They highlight that few forces have career paths or succession planning in place for police staff and forces feel they may be losing staff at a higher rate than is desirable. With more roles being filled by civilians it would seem that the service needs to address this issue or they risk losing key talent and not maximising their training investments. It is vital that police organisations try to do something about police staff careers because if they don't "the service may then be left with those who, for whatever reason, do not seek greater recognition, promotion and increased responsibility. In these circumstances it is questionable whether the service can attract the best in the field, or if they do, whether they can keep them" (Berry et al, 1998, p.236). As discussed in chapter 3 the career anchor model provides a mechanism for raising awareness of career talents, motives and values. This is a key first step in providing successful career development for employees (Meijers, 1998). The second step is matching these individual motives and values to those of the organisation (Hesketh & Considine, 1998). The studies reported in chapters 8 and 9 give an indication as to how useful the career anchor model might be in supporting this second step.

The research presented in chapters 8 and 9 focuses on police staff from a selection of departments within the host organisation and staff in a selection of roles. As discussed in chapter 2 the career anchor model was developed with and for individuals in management roles. Since its development other researchers have successfully considered the career anchor model with non-management samples (e.g. Jiang & Klein, 2000). Schein (1978) also stated his belief that the model would be applicable to a wide range of occupations. It is argued here that focusing solely on management roles limits the application of the career anchor model. Schein (1978) believed that career anchors develop through work experience and as such it can take a number of years before an individual becomes aware of their primary anchor. As discussed in chapter 5 consideration of the primary anchor is not the only concern. Similarly the stability of career anchors, even once established might still not be guaranteed due to the nature of perpetual change that has become a permanent factor in the workplace today. As long as the impact that significant events may have on an individual's career anchors is recognised it is argued here that the model can be applied to people in a wide range of occupations. This section provides a brief introduction to each of the departments and specific roles considered in the following two chapters.

7.3.1 Operations Support

This department consists of police staff who support the operations of police officers. The majority of police staff in this department work in a large communications room. Here different levels of staff take emergency and non emergency calls covering most of the host organisations operational policing area. Once a call has been taken the staff in this department make decisions about the action that needs to be taken including the deployment of police officers to the scene. The communications room works on a shift basis as it requires cover 24/7, 365 days of the year. Three specific roles from this department are considered in this research:

7.3.1.1 Call Management Centre Supervisor (CMCS)

This is a grade 5/6 role and individuals within it are responsible to the Call Management Centre Manager and responsible for, Police Constables, Call Takers and Communications Operators. The purpose of the role is to oversee functions within the call management centre ensuring that a high quality service is delivered to both the public and the police.

7.3.1.2 Communications Operator (CO)

This is a grade 4 role and individuals within it report to the Call Management Centre supervisors but are not responsible for any staff themselves. The purpose of this role is to receive calls from call takers and provide resolution as the first point of contact.

7.3.1.3 Call Taker (CT)

This is a grade 3 role and individuals within it report to the Call Management Centre supervisors but are not responsible for any staff themselves. The purpose of the role is to receive and respond to emergency and non emergency calls and determine the appropriate level of response.

7.3.2 Criminal Justice Support Department (CJSD)

CJSD carries out two main functions, the first of these is to ensure all prosecutions for the host organisations are conducted efficiently and effectively. The second is to run the central ticket office responsible for all fixed penalties within the geographical boundaries of the host organisation.

7.3.2.1 Caseworker (CS)

This is a grade 3 role and reports to the criminal justice support unit (CJSU) supervisor. These individuals do not have any responsibility for staff themselves. The main purpose of the role is to support police officers in case progression and ensure the continuity of support for witnesses through the prosecution process.

7.3.2.2 General Support Worker (GSW)

This is a grade 1/2 role and reports to the CJSU team leader but has no direct responsibility for staff itself. The main purpose of the role is to provide administration services in support of policing responsibilities within the criminal justice system.

7.3.3 Crime

The Crime department consists of both police staff and police officers. Within this department the police staff are mostly responsible for forensic investigations. These are split into crime scene, imaging, fingerprints and forensic submissions. The roles related to forensic investigations offer police staff a career path progressing from assistant to principle forensic investigator. This department also consists of the

firearms unit staffed mainly by police officers. Finally a relatively new police staff role based in this department is that of community support officer. The majority of roles in the crime department are based at the host organisation's headquarters.

7.3.3.1 Forensic Investigator (FI)

This is a grade 4/5 role and individuals within it are responsible to the principle forensic investigator within their specialist area. Forensic investigators are not responsible for any staff themselves. The purpose of this role is to support the resolution of crimes committed through research and analysis of forensic evidence.

7.3.3.2 Community Support Officer (CSO)

This is a grade 4 role and individuals within it are responsible to the duty police officer at their station. They are not responsible for any staff themselves. The purpose of this role is to tackle anti social behaviour in the local community and to support police officers in community safety initiatives. These individuals are involved in front line policing.

7.3.4 Divisional Administration

The host organisation consists of five divisions representing different local areas. Each division has a central police station and this is where the majority of the divisional administration staff will be based. Divisional administration staff will also be based at every police station within the geographic area of the host organisation. These staff assist police officers by ensuring all administration related to divisional issues is up to date and accessible.

7.3.4.1 Counter Clerk (CC)

This is a grade 2 role and individuals in it report to the divisional shift sergeant but have no responsibility for staff themselves. The main purpose of this role is to provide a first point of contact for any visitor to the police station.

7.3.4.2 Public Service Desk Operator (PSD)

This is a grade 2/3 role and individuals within it report to the PSD supervisor but have no responsibility for staff themselves. The main purpose of this role is to provide efficient and effective administrative support to the public service desk within their station.

The purpose of this chapter was to provide an introduction to the host organisation as the data used in chapters 8 and 9 were collected from here. The current level of career development provision for police staff within the host organisation appears to be very limited. Individuals are recruited for one particular role and any further development appears to be conducted on an ad hoc basis rather than in a more strategic way. When police staff do apply for other positions within their organisation they are faced with competition from external candidates who may have more specific role knowledge from their work in other organisations. Chapters 8 and 9 describe a study of congruence in relation to the career anchor model. The first step of this is to try and match career anchors to police staff job roles and secondly to measure fit and examine its relationship to job satisfaction, organisational commitment and career salience. If a relationship is found firstly between anchors and job roles and secondly between fit and outcomes then the career anchor model could be utilised within the host organisation as a basis for CPM. One of the ways in which the model could be used within the organisation is to increase employees' awareness of their talents, values and motives. Also, as research has shown line managers are taking a more active role in CPM (Purcell & Hutchinson, 2007) and they benefit from having a good understanding of the needs of their staff (Granrose & Portwood, 1987), giving managers knowledge of their staff's career anchors could also be useful. The literature indicates that career anchors to date have mainly been used for one to one career counselling and for self exploration (Evans, 1996) rather than as a basis for organisational CPM.

Chapter 8

Matching anchors to jobs

Chapter 8 – Matching Career Anchors to Jobs

8.1 Chapter Introduction

The research described in this and the following chapters builds on the studies described in chapters 5 and 6 and aims to explore the role of career anchors in the workplace through an examination of person-job (PJ) and person-organisation (PO) fit (congruence). In order to explore whether degree of congruence between a person's career anchors and the characteristics of their job have an effect on work related outcomes such as job satisfaction, it was first necessary to establish a way of measuring fit in a more sophisticated way than in previous research. To date the exploration of congruence in relation to career anchors has been conducted using assumptions made by the researcher of the anchors that are suited to particular roles (e.g. Bester & Mouten, 2006; Feldman & Bolino, 2000; Igbaria, Greenhaus & Parasuraman, 1991). Tinsley (2000) calls for a need for commensurate measurement in congruence studies. In the research presented in this chapter and the next developing a measure of job anchors that in turn creates a job anchor profile and then calculating the fit between the two achieves this. The current chapter outlines the development of the job anchor profiles. Section 8.2 describes how an expert panel from the host organisation was used initially to assess the viability of different police staff job roles being suited to different career anchors. Next, section 8.3 explains how a commensurate measure of job anchor characteristics was developed. This measure is used to calculate a profile similarity index for the congruence analysis reported in chapter 9. The specific hypotheses to be examined in chapter 8 are given below.

H8.1: A commensurate measure of job anchor characteristics can be developed from the COI.

H8.2 Career anchors can be matched to job roles within the host organisation and different jobs will have different career anchor profiles.

8.2 Matching anchors to police staff jobs – expert panel

An expert panel from the host organisation was used to explore the possibility that certain jobs may be more suited to certain career anchors than others. When Schein originally proposed the career anchor model he felt that career anchors were part of

an individual, not necessarily part of a job (Schein, 1978). In other words he felt that you could not tell someone's career anchor from the job that they do. At the same time, Schein (1978) describes one of the key aspects of the career anchor approach as congruence. If the congruence between the person and the job they are doing is high then other factors such as work performance, job satisfaction and organisational commitment and psychological well-being should also be improved (Feldman & Bolino 1996). In order to test this statement some methods of matching career anchors to some aspect of the work environment has to be developed. As discussed in chapter 3, other researchers have addressed this problem by making assumptions about the career anchors that would suit a certain job. For example Tan and Quek (2001) felt that the educators' jobs would be suited to security and sense of service but not to general management or autonomy whereas Bester and Mouton (2006) felt that the role of psychologist would be suited to the sense of service anchor. In these studies no expert opinions were sought on the job roles from the job incumbents or from those who knew the jobs well.

8.2.1 Method

8.2.1.1 Procedure and Sample

The panel needed to consist of people who had a good understanding of each job and would therefore be able to make judgements about how well each job fitted each of the career anchors. The host organisation was approached with the aim of the study and asked to suggest personnel from four departments to form the expert panel. The suggested personnel were heavily involved in recruitment and appraisal for these departments and therefore it was felt they would have a good understanding of the job roles in question. Participation in the panel was voluntary but all panel members had to be invited by the author and suggested by the host organisation. Panel members were sent a pack of information about career anchors and the purpose of the project before their meeting. This can be found in Appendix 8.

Table 8.1 shows the selected departments, the number of relevant panel members and the number of police staff roles within each of the chosen departments the panel were to discuss. A total of 126 roles were to be considered by the panel. It was decided to hold four panel meetings, one for each department. Each meeting lasted approximately three hours.

Table 8.1 Expert panel departments, roles and members.

Department	Number of Police Staff Roles	Number of Panel Members
Operations Support	19	9
CJSD	34	6
Crime	56	6
Divisional Administration	17	7

8.2.1.2 The Matching Process

To aid the matching process panel members were provided with flashcards for each of the 8 anchors (examples in Appendix 8). The flashcards contained 9 bullet points describing aspects of work that are important in each of the anchors. It was decided that an anchor would be deemed to be a match for a role if the panel agreed that at least 7 of the 9 bullet points fitted the job. All panel members had to agree for an anchor to be deemed a match.

8.2.2 Results

At each of the panel meetings it was decided that security and lifestyle would be matched to all roles. Security because the constabulary is a public sector employer therefore the panels believed it provides;

- Stable employment
- A predictable future – in terms of secure employment and location
- Secure employment
- Location security
- Loyalty (to its employees)
- Reliability (in terms of annual pay rises, secure employment)
- Secure environment

(bullet points taken from flashcard, see Appendix 8)

Lifestyle was matched to all because the constabulary operates a flexible working policy which is open to all employees so therefore the panels believed it provides:

- Flexibility
- Work life balance (if requested, see Appendix 8)

- Adaptable working hours
- Understanding employer (requests are always considered)
- Geographical stability
- Part time opportunities
- Consideration of all transfer requests

(bullet points taken from flashcard)

The results for all 8 anchors from the 4 expert panel meetings are shown in Table 8.2.

Table 8.2 Results of the expert panel matching process

Anchor	Number of jobs matched in total	%	Operations Support	%	CJSD	%	Crime	%	Divisional	%
Lifestyle	126	100	19	100	34	100	56	100	17	100
Security/Stability	126	100	19	100	34	100	56	100	17	100
Functional	74	59	13	68	19	56	38	68	4	24
Expertise										
Service	60	48	11	58	17	50	28	50	4	24
Pure Challenge	51	40	10	53	20	59	19	34	2	12
General	49	39	9	47	18	53	20	36	2	12
Management										
Autonomy	45	36	6	32	18	53	20	36	1	6
Creativity	21	17	1	5	2	6	16	29	2	12

From this it can be seen that there is some variability in the career anchors of jobs between departments. For example general management was only deemed to match 12% of divisional police staff roles compared to 53% in CJSD. This may reflect the fact that more management roles on divisions are still carried out by police officers whereas in CJSD there a high percentage of police staff in management roles exists. Only 17% of jobs overall were deemed to be matched to the Creativity anchor. This could be due to the way this was conceptualised by Schein as entrepreneurial creativity, encompassing innovation and a desire to build one's own business rather than creativity in the more artistic or open thinking sense. The nature of the host organisation is not one which entrepreneurial creativity would be naturally matched to.

8.2.3 Expert Panel Summary

The expert panel meetings revealed that there was some variability in the career anchors when matched to each of the job roles under consideration. This provides an indication that career anchors could be matched to and distinguish between job roles. However, Arnold (2004) discusses the role of experts in the matching process of Holland's vocational personalities to occupations. He suggests that whilst experts may know the job they will not be aware of the adaptations made by job incumbents. Therefore, it was decided to pursue the objective of developing a commensurate measure of job anchor characteristics using the knowledge of job incumbents. A commensurate measure is necessary to enable a person-job fit measure to be calculated for the study described in chapter 9.

8.3 Developing a measure of job anchor characteristics

The 40-item, 8 factor COI, examined in chapter 5 of this thesis for its empirical properties, is used as the basis for development of a new questionnaire on job anchor characteristics.

8.3.1 Method

Initially each item of the COI was re-worded from an individual perspective to a job perspective, for example:

1: To build my career around some specific function or technical area is

was changed to:

1: This job enables me to work in a specific function or technical area

This approach led to a great deal of repetition in the job version; therefore an alternative approach was taken. The job anchor characteristics questionnaire was constructed partially through rewording questions from the COI and partly through generating questions from the career anchor literature. The final 40 questions can be found in Appendix 9. Each of the eight anchors is measured with five questions in the same way as in the COI. Responses were collected on a six point Likert scale.

The next stage of this process was to construct a job career anchor profile for nine of the roles within the four departments focused on by the expert panel. The nine roles used were chosen because they had the highest number of job incumbents. The chosen jobs are listed in Table 8.3. Using a variety of job roles was deemed necessary to demonstrate the construct validity of the measure by showing that it could differentiate between jobs. The job anchor measure was made available online and sent to line managers who had participated in the expert panel. The managers then distributed the link to the questionnaire to all of their staff. In total 157 useable responses were received. These are broken down by job role in Table 8.3.

8.3.2 Results

Table 8.3 shows the descriptive statistics for each scales of the measured by job career anchor measure. Table 8.4 shows the Cronbach's alpha coefficients demonstrating the internal consistency of each of the scales measure by the job career anchor measure, these were deemed to be acceptable. The next stage required the development of job anchor characteristic profiles to be constructed.

8.3.2.1 Intercorrelations

To determine whether the mean is an appropriate representation for each group of job incumbent's scores it was necessary to examine whether the job ratings between individuals within the same job were reasonably similar. This was done by a) deriving a job anchor profile from each job incumbent (see example Table 8.5 for CSOs); b) calculating the Pearsons correlation coefficient between every combination of job incumbents job anchor profile within the same role (i.e. each correlation represents a comparison between eight anchors scores for the two job incumbents, see example Table 8.6 for CSOs) and finally c) calculating the average value of the coefficients and the standard deviation (Table 8.7 for all jobs). This is the method employed by Francis-Smythe and Robertson (2003).

Table 8.3 Descriptive statistics for the job roles used for the matching process

Anchor	CW			GSC			CT			CMCS			CO			CSO			FI			CC			PSD		
	N	M	sd	N	M	sd	N	M	sd	N	M	sd	N	M	sd	N	M	sd	N	M	sd	N	M	sd	N	M	sd
TF	15	13.53	3.98	8	13.5	2.98	14	23.64	3.30	11	19.36	4.46	27	19.52	3.70	36	16.58	4.02	21	21.24	4.18	16	14.62	4.59	9	19.22	4.82
GM	15	9.33	0.44	8	8.00	2.39	14	9.93	2.76	11	15.90	5.68	27	15.22	2.62	36	7.94	1.87	21	9.00	2.56	16	9.38	3.03	9	8.89	3.22
AU	15	13.13	4.90	8	13.13	4.76	14	14.36	4.54	11	11.82	2.64	27	11.11	2.74	36	15.17	2.72	21	13.90	3.08	16	12.50	4.60	9	11.67	3.91
SE	15	19.73	2.99	8	19.88	5.14	14	19.14	4.83	11	24.36	2.29	27	22.07	3.72	36	21.78	3.29	21	21.62	3.89	16	22.38	4.25	9	22.78	3.96
CR	15	11.13	3.42	8	9.13	2.70	14	14.14	5.53	11	13.45	3.75	27	12.33	2.94	36	19.22	5.13	21	12.14	3.34	16	12.31	3.77	9	13.33	4.79
SV	15	22.33	3.15	8	17.13	2.23	14	24.64	4.18	11	23.91	4.04	27	21.81	4.03	36	24.94	4.68	21	21.76	4.59	16	20.63	4.66	9	19.33	1.22
PC	15	15.47	1.85	8	10.88	3.40	14	16.57	2.85	11	17.55	4.63	27	15.96	3.08	36	17.83	4.53	21	16.95	3.51	16	15.50	4.13	9	17.00	4.21
LS	15	21.8	2.56	8	21.35	6.20	14	20.21	5.55	11	23.91	2.98	27	20.44	4.01	36	18.94	4.15	21	15.52	5.85	16	17.31	5.86	9	14.67	5.61

Key: CW = Caseworker, GSC = General Support Clerk, CT = Call Taker, CMCS = Call Management Centre Supervisor, CO = Communications Operator, CSO = Community Support Officer, FI = Forensic Investigator, CC = Counter Clerk, PSD = Public Service Desk.

Table 8.4 Internal consistency of job career anchor measure

Scale	Cronbach α
TF	0.56
GM	0.81
AU	0.74
SE	0.72
CR	0.69
SV	0.73
PC	0.77
LS	0.79

Table 8.5 Job Anchor characteristics for 5 CSOs

	CSO 1	CSO 2	CSO 3	CSO 4	CSO 5
TF	13	10	15	15	11
GM	8	10	12	5	6
AU	14	10	17	12	18
SE	25	17	23	25	16
CR	15	12	20	14	21
SV	26	13	28	22	26
PC	21	11	20	13	16
LS	25	15	20	30	15

Table 8.6 Excerpt of correlation matrix between sample of CSO job incumbents

	CSO1	CSO2	CSO3	CSO4	CSO5
CSO1	1				
CSO2	.79	1			
CSO3	.88	.63	1		
CSO4	.87	.86	.67	1	
CSO5	.94	.57	.89	.73	1

Table 8.7 Average inter-correlations of job incumbents profiles within jobs

	n	Average inter- correlation (Pearson r)	s.d
Caseworker	15	.80	.12
General Support Clerk	8	.62	.24
Call Taker	14	.60	.28
CMC Supervisor	11	.75	.15
Communications Operator	27	.66	.18
CSO	36	.74	.15
Forensic Investigator	21	.65	.20
Counter Clerk	16	.61	.22
PSD Operator	9	.74	.16

The intercorrelations for all jobs show good consistency between ratings of job incumbents. Coolican (1999) indicates that values over 0.7 are acceptable and Francis-Smythe (1996) values over 0.60. All of the nine job roles are above 0.60 and four are above 0.70. Call takers (0.60) and Communications Operators (0.66) fall below 0.70. These staff work in a variety of different teams so it could suggest that there are differences between the roles in different teams. Other jobs with lower values are counter clerks (0.61) and general support clerks (0.62). These roles are conducted on divisions so these staff are based in five different locations and will have different managers within those divisions. As a result there may be some differences between divisions in how these roles are played out. Finally the forensic investigator role (0.65) has four different specialisms within it. This may result it four slightly different versions of the role. The smaller values for these jobs may be an indication that there is more variability in these roles rather than being an indicator of unreliability of measurement. Therefore the intercorrelations for each job roles were deemed to be satisfactory.

8.3.2.2 Distinguishing between job roles

One way of demonstrating construct validity for the job anchor measure is to show that the measure discriminates between two or more jobs, which are hypothesised to vary on the degree to which they provide for different career anchors. In their

matching process the expert panel indicated that they expected there to be differences between these nine jobs in the career anchors they were best suited to.

Significant differences between jobs were tested for using MANOVA. The anchor scales (TF, GM, AU, SE, CR, SV, PC, LS) were the dependent variables and job type the group factor with nine levels.

The analysis showed that job anchor characteristics differed significantly across jobs $F(80,611) = 4.58$, $p < 0.001$, Wilk's Lambda = 0.051 see Table 8.8 and Figure 8.1. The univariate findings showed that all anchors except SE differed across jobs.

Using MANOVA it appears that the jobs do differ in terms of their job anchor characteristics, thus lending support for the construct validity of the job anchor measure. At the same time this finding questions the blanket assignment of LS to all of the 9 roles.

Table 8.8 Differences in job anchor characteristics between jobs

Job anchor characteristics	Job Type (df = 10,102)
TF	$F = 4.11^{***}$
GM	$F = 6.60^{***}$
AU	$F = 1.96^*$
SE	$F = 1.30$
CR	$F = 6.19^{***}$
SV	$F = 3.60^{***}$
PC	$F = 2.18^*$
LS	$F = 4.64^{***}$

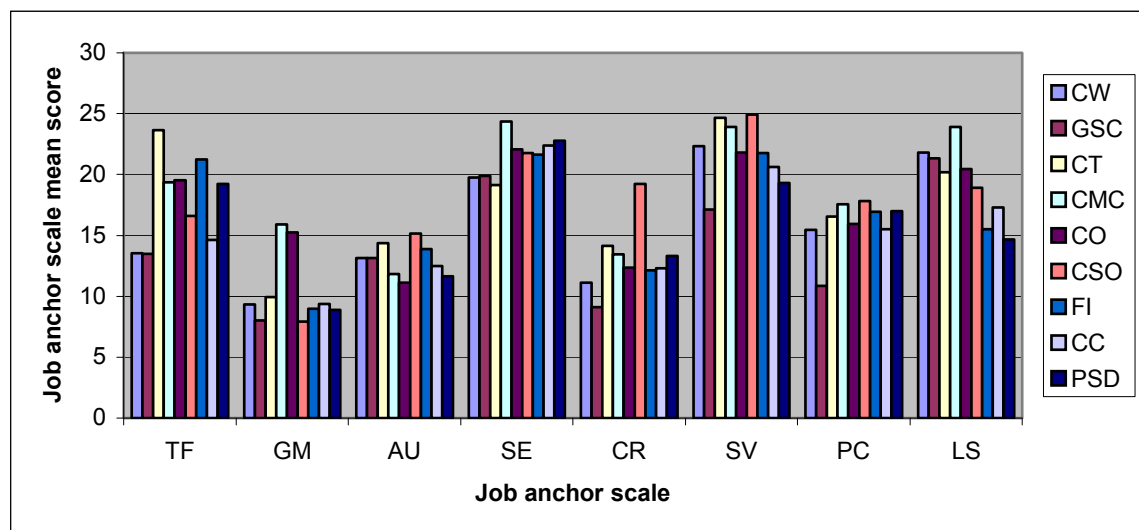
Key: $*p < 0.05$, $**p < 0.01$, $***p < 0.001$

8.3.3 Development of a job anchor measure summary

The analysis showed an acceptable level of inter-rater agreement in the assessment of job anchor characteristics using the job anchor measure. This indicates that the measure is suitable for matching career anchors to jobs to allow job anchor profiles to be created. MANOVA showed that the job anchor measure was able to discriminate between the nine police staff job roles under consideration. The results

showed that all of the anchors with the exception of SE varied across the jobs. The fact that SE did not differ could be explained because all the jobs are taken from the same organisation and the expert panel suggested this as an organisational anchor. As discussed in chapter 7 the host organisation is a public sector organisation and as such is able to offer a reasonable level of job security to all of its employees. This seems to be reflected in the consistency of SE scores across the roles considered here. The other organisational anchor, LS did however differ across jobs. Reasons for this could be that allowances for lifestyle considerations may vary across departments. The expert panel discussed LS as an organisational anchor due to factors such as flexible working policies that apply to the whole organisation. The finding that LS as a job anchor varies between jobs could indicate that this policy is not being adhered to consistently across the organisation. This also indicates that anchor scores for jobs may not be consistent over time.

Figure 8.1 Differences in job anchor characteristics between jobs



8.4 Chapter Summary

To summarise, this chapter has firstly examined the viability of different jobs providing for different career anchor needs using an expert panel from the host organisation. Support for this notion was found, as the panel were able to match job roles to certain career anchors and not to others. It could be argued that using a panel of experts is still a subjective approach to the matching process. However each panel meeting had at least six members and they were provided with the

flashcards to guide their discussions and make the process more structured. It would have to be recognised that this approach is still limited by possible subjectivity but it is a move forward from previous work where the researcher only has matched anchors to job roles. It was observed during the meeting that decisions about whether or not an anchor matched a job were made relatively quickly, suggesting that the panel found it easy to distinguish between jobs using career anchors as a model.

H8.1: A commensurate measure of job anchor characteristics can be developed from the COI.

A job anchor characteristics measure was developed, based on the COI and acceptable levels of intercorrelations were found between job incumbents' ratings this provides some support for H8.1. Table 8.4 shows the Cronbach's alpha coefficients for each of the job career anchor measure scales. These are given as a demonstration of the internal consistency of the measure. However, as discussed in chapter 5, section 5.5, the use of Cronbach's alpha to demonstrate internal consistency has been criticised (Boyle,1991). Despite this it is still widely used. Field (2006) suggests that coefficients of at least 0.7 can be said to indicate a good level of internal consistency. 6 out of 8 coefficients for the job career anchor measure are above 0.7, the coefficient for CR is 0.69 and for TF is 0.56. The TF scale also displayed a level of internal consistency that was below the acceptable level in the COI. As the job career anchor scale has been developed from this it is not surprising that this has occurred again.

H8.2 Career anchors can be matched to job roles within the host organisation and different jobs will have different career anchor profiles.

Support for the construct validity of this measure was gained through the demonstration of significant and plausible differences between jobs demonstrated through MANOVA. No differences were found between jobs on the security anchor, this could be because of the nature of the organisation. The expert panel suggested that security should be viewed as an organisational anchor as all jobs were relatively secure. This is because the host organisation is a public sector organisation and as discussed in chapter 7 this enables them to be in a position to offer their employees a high level of job security. The expert panel also identified the lifestyle anchor as an organisational anchor however the MANOVA showed significant differences between

jobs on this. The jobs being examined all have varying shift patterns some being Monday to Friday 9-5 with others requiring 24 hour cover, 7 days a week on a shift basis. This is likely to impact on incumbent's perception of the jobs suitability for the lifestyle anchor. The analysis showed that the lowest mean scores were demonstrated in GM, AU and CR. This is a sensible finding when considering the jobs being analysed, CR has been discussed above and the lower scores on this anchor may be due to the way it is conceptualised as entrepreneurial creativity by Schein (1978). Of the nine jobs in question here only one has supervisory responsibilities (CMCS). Therefore high scores on GM would not be expected. Similarly high scores on the AU anchor would be unlikely as the host organisation is fairly bureaucratic meaning there is little autonomy in some of the roles.

The analysis reported here shows that the job anchor measure can discriminate between police staff roles and as such provides full support for H8.2: This commensurate measure can be used to create job anchor profiles. This measure will be used in the objective measurement of PJ fit. Table 8.9 shows all the jobs that will be used in the congruence analysis described in the following chapter. The table shows the mean score for each anchor, as judged by the job incumbents and the anchors that the expert panel matched to each job (indicated by X). The final row of the table shows the rank agreement between the expert panel and job incumbents' ratings. This shows that for each of the 9 jobs the expert panel matched the anchor scored highest by the job incumbents to the job role in question. It can be seen that there was a reasonable level of agreement between the expert panel's initial ratings and those made by the job incumbents.

Table 8.9 Summary of job-anchor matching process

Anchor	CW		GSC		CT		CMCS		CO		CSO		FI		CC		PDS	
	Mean (Rank)	Panel	Mean (Rank)	Panel	Mean (Rank)	Panel	Mean (Rank)	Panel	Mean (Rank)	Panel	Mean (Rank)	Panel	Mean (Rank)	Panel	Mean (Rank)	Panel	Mean (Rank)	Panel
TF	13.53 (5)		13.5 (4)		23.64 (2)		19.36 (4)	X	19.52 (4)	X	16.58 (6)		21.24 (3)	X	14.62 (5)	X	19.22 (3)	X
GM	9.33 (8)		8.00 (7)		9.93 (8)		15.9 (6)	X	15.22 (6)		7.94 (8)		9.00 (8)		8.89 (8)		8.89 (8)	
AU	13.13 (6)	X	13.13 (5)		14.36 (6)		11.82 (8)	X	11.11 (8)		15.17 (7)		13.90 (6)		12.50 (6)	X	11.67 (7)	
SE	19.73 (3)	X	19.88 (2)	X	19.14 (4)	X	24.36 (1)	X	22.07 (1)	X	21.78 (2)	X	21.62 (2)	X	22.38 (1)	X	22.78 (1)	X
CR	11.13 (7)		9.13 (8)		14.14 (7)		13.45 (7)		12.33 (7)		19.22 (3)		12.14 (7)		12.31 (7)		13.33 (6)	X
SV	22.33 (1)	X	17.13 (3)	X	24.64 (1)	X	23.91 (2)	X	21.81 (2)	X	24.94 (1)	X	21.76 (1)	X	20.63 (2)		19.33 (2)	X
PC	15.47 (4)	X	10.88 (6)		16.57 (5)	X	17.55 (5)	X	15.96 (5)	X	17.83 (5)		16.95 (4)		15.50 (4)		17.00 (4)	
LS	21.8 (2)	X	21.35 (1)	X	20.21 (3)	X	23.90 (3)	X	20.44 (3)	X	18.94 (4)	X	15.52 (5)	X	17.31 (3)	X	14.67 (5)	X
Panel & job incumbents	1, 2, 3,4,6		1,2,3		1,3,4,5		1,2,3,4,5,6,8		1,2,3,4,5		1,2,4		1,2,3,5		1,3,5,6		1,2,3,5,6	

Key: Mean – job incumbent mean score for job role

X – indicates the expert panel matched this anchor to the role

Panel & job incumbents – this gives the rank of each of the anchors the expert panel matched to the job role

Chapter 9

Career Anchor Congruence

9.1 Introduction to the congruence studies

The studies reported here build on the research findings from chapter 8 by examining the proposed role of congruence in the career anchor model. At the same time they provide an analysis of the criterion related validity of the career orientations inventory (COI) by examining the relationship between career anchors, as measured by the COI, with criterion specifically, job satisfaction and organisational commitment. As discussed in chapter 5, criterion validity is a practical measure and is concerned with the prediction of certain outcomes (DeVellis, 1991). Criterion related validity can be examined predictively or concurrently. Full details of the differences between these approaches are given in chapter 5, section 5.2.3. As a reminder, the predictive approach takes a longitudinal design by measuring outcomes over time, whereas the concurrent approach enables criterion validity to be examined instantly. For reasons of practicality a concurrent approach is taken here. The predictive and dependent variables were collected at the same time and from the same participants.

9.1.1 Types of fit to be considered

Two approaches to examining the role of career anchor congruence are taken, objective and subjective. A detailed review of the congruence literature and a critical analysis of the methodological issues that accompany this can be found in chapter 4, sections 4.3.3 and 4.3.4. In summary, subjective congruence is measured at the individual level with measures of the individual and the environment being given by the same person. It often involves asking the individual directly to rate their perceived their level of fit (Cable & Edwards, 2004). Objective congruence uses a commensurate approach to the measurement of individual and environment factors (Edwards & Shipp, 2007). Tokar, Fischer and Subich (1998) and Tinsley (2000) recommend that researchers use sophisticated methodology in examining fit relationships. They suggest that researchers consider the use of moderator variables including the role of fit as a moderator. The role of both career anchor congruence and career salience as moderators are considered here, the rationale for the relevant hypotheses follows.

9.1.2 Rationale for hypotheses

Chapter 2 discusses the relationships between age, gender, job satisfaction and organisational commitment (sections 2.2.5.1 and 2.2.5.2). Age has long been associated with job satisfaction with some authors suggesting a U shaped relationship (e.g. Clark, Oswald & Warr, 1996) and others suggesting alternative patterns of change including a linear relationship (e.g. Kalleberg & Losocco, 1983; Grube, Schroer, Hentzschel & Hertel, 2007). Other studies have suggested that there are gender differences in the way in which job satisfaction is perceived and evaluated (e.g. Miller, 1980; Witt & Nye, 1992). Organisational commitment has been shown to increase with age (Dick & Metcalfe, 2001) and also to be related to gender with women showing higher levels of commitment than men (Mathieu & Zajac, 1990). As both age and gender have been associated with job satisfaction and organisational commitment they will be considered as control variables in the prediction of job satisfaction and organisational commitment.

H9.1 Demographics will explain a significant proportion of the variance in a) job satisfaction and b) organisational commitment

As discussed in chapter 3, Schein (1978) believed that congruence between an individual's career anchors and their environment was an important element of the career anchor model. He believed it was this congruence that led to improvements in work related outcomes such as job satisfaction. Congruence between person and aspects of their environment has been shown many times to predict such outcomes using a variety of variables in a range of literature, not just concerning careers. In the careers literature this has commonly been explored using Holland's model (e.g. Harris et al., 2001; Tranberg, Slane & Ekeberg, 2003; Spokane, 1985), this research is considered in chapter 2, section 2.2.5. The proposed relationship between congruence and outcomes in relation to career anchors is shown as model 1 in Figure 9.1 (H9.2). This will be examined in two ways, using objective and subjective measures of fit.

H9.2 Career anchor congruence will explain a significant proportion of the variance in a) job satisfaction and b) organisational commitment.

Evidence for dispositional sources of job satisfaction has been reported in a variety of literature (Judge, Heller & Mount, 2002) and is discussed in chapter 2, section 2.2.5.1. This literature has found relationships between job satisfaction, personality,

values and interests. Research using Holland's model of vocational personality revealed that certain constructs of the model were more likely to be related to job satisfaction regardless of congruence (Tranberg, Slane & Ekeberg, 1993). This indicates that vocational personality has a direct effect on job satisfaction. Similarly, Igbaria and Baroudi (1993) found relationships between the TF career anchor and job satisfaction, suggesting that career anchors may have a direct effect on job satisfaction. The proposed relationship between career anchors and outcomes is shown in Figure 9.1, model 1, H9.3.

H9.3 Career anchors will explain a significant proportion of the variance in a) job satisfaction and b) organisational commitment.

Previous research has only considered the direct effects of career anchors and outcomes (Igbaria & Baroudi, 1993) or the direct effects of anchor congruence and outcomes (e.g. Bester, Phil & Mouten, 2006). Tinsley (2000) believes it is also important in fit research to consider the role of fit as a moderator of the relationship between predictor and outcome. The role of moderators in congruence research is discussed in chapter 4, section 4.3.4. Baron and Kenny (1986) define a moderator as a variable that "affects the direction and/or strength of the relation between an independent or predictor variable and a dependent criterion variable" (p1174). It is generally assumed that there will be a gradual, steady change in the effect of the IV on the DV as the value of the moderator changes (Moyle, 1995). In this case it is expected that as the value of the moderator (i.e. fit) increases the relationship between the IV (career anchors) and DV (outcomes) will strengthen. This acknowledges that the hypothesised relationship between career anchors and outcomes may not be universally true but may be dependent on fit. For example, the positive relationship between TF and job satisfaction (as found by Igbaria & Baroudi, 1993) may not be true for everyone but may be moderated by fit. TF may predict JS but only for those with high fit. Therefore the role of career anchor congruence as a moderator to the relationship between career anchors and outcomes will be explored (shown in model 1, Figure 9.1, H9.4). Baron & Kenny's (1986) approach to examining the effects of moderator variables will be used.

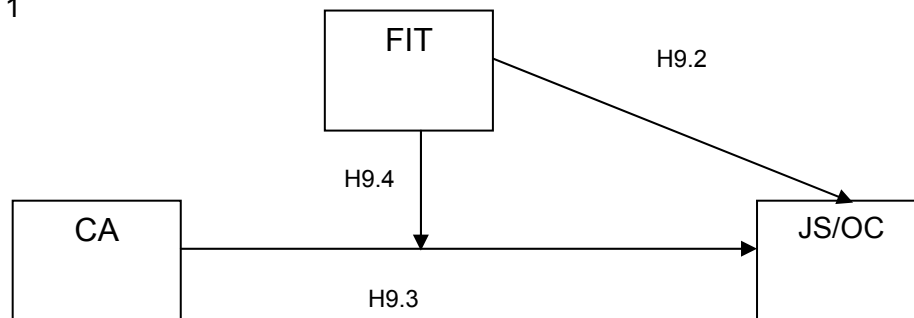
H9.4: Congruence will moderate the relationship between career anchors and a) job satisfaction and b) organisational commitment.

Schein believed that congruence between career anchors and aspects of an individuals' working environment would be related to positive outcomes (Schein, 1978; 1996). This is consistent with other vocational theories that focus on the role of congruence between the individual and either the job, the organisation or some other aspect of their environment (e.g. Granose & Portwood, 1987; Spokane, 1985). However, Greenhaus (1971) believed that career salience has a role to play in moderating this relationship. Arnold (2004) also believes that the importance of work and careers may have an impact on the effects of congruence. Greenhaus (1971; 1973) tested the hypothesis that self-occupational congruence would be related to career salience. It was expected that those with high salience would be more likely to experience congruence because they have invested more thought into their career choice. Greenhaus found some support for this hypothesis with men but not with women. Greenhaus then proposed that the correlation between congruence and satisfaction would be higher for individuals with high career salience. However, no support was found for this hypothesis (Greenhaus, 1971; 73). However, he believed this was due to sampling and that it required further investigation. The role of career salience as a moderator of the relationship between career anchor congruence and outcomes will be examined here and is shown as model 2 in diagram 9.1, H9.5. As stated above a moderator variable affects the strength and/or direction of the relationship between predictor and outcome (Baron & Kenny, 1983). In this model it is expected that as career salience increases the relationship between fit and outcomes will increase.

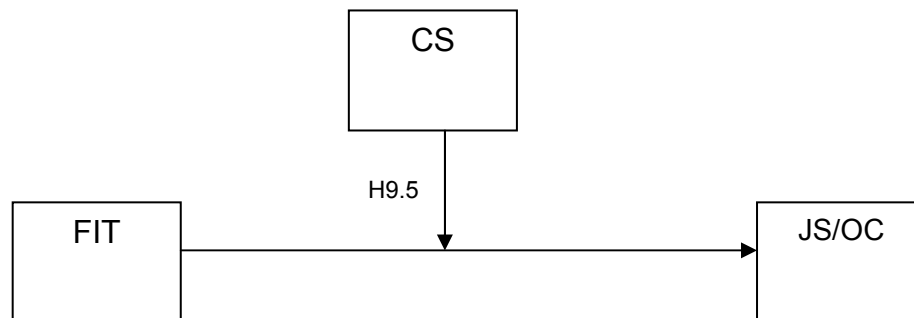
H9.5: Career salience will moderate the relationship between congruence and a) job satisfaction and b) organisational commitment.

Figure 9.1 Models to be tested in the analysis of career anchor congruence

Model 1



Model 2



9.1.3 Introduction to Multiple Regression

Multiple regression is the most commonly used analytical technique in the measurement of congruence. It is used to examine the relationship between a dependent variable or outcome and one (in bivariate regression) or more (in multiple regression) independent variable(s) or predictors. The aim of multiple regression is to predict changes in the outcome variable from changes in the predictors (Tabachnick & Fidell, 2001). Selection of the predictors is important and should ideally be based on previous research; a general rule of thumb is that the lowest possible number of predictors is preferable (Field, 2006). There are a number of ways for a researcher to approach a regression analysis and these all depend on the way in which variables are entered into the model. Predictor variables will normally show some degree of correlation and as such the order in which they are entered will have an impact upon the results. The hierarchical method involves entering the predictors in order of importance based on previous research. Those thought to have the largest impact should be entered first. Any unknown predictors (ones for

which there is no previous research to indicate their impact) should be entered at the end in the order of believed importance. The forced entry or standard method forces all predictors into the model simultaneously. The researcher has no input on the order in which predictors are entered into the model. Finally the stepwise method allows predictors be entered purely on the basis of mathematical criterion.

In multiple regression ANOVA is conducted to judge the fit of the model to the data. From this a large F ratio suggests that the model is better at predicting the outcome variable than, for example, just using the mean (Field, 2006). In multiple regression a multiple correlation coefficient is calculated called multiple R. This represents the correlation between the predicted and observed values of the outcome variable. If multiple R is equal to one, this suggests that the model predicts the outcome perfectly. Therefore, the value of multiple R gives an indication as to how well the regression model fits the data. The amount of variance in the outcome variable explained by the model is expressed as R^2 . In hierarchical regression the contribution of each individual variable to the model is calculated and shown as an R^2 change (ΔR^2). This value shows the additional amount of variance that each subsequent predictor is able to explain over and above that explained previously. In addition regression enables us to evaluate the individual contribution of each predictor by examining the B values and their standard error (SE B). The standard error is used to determine if the B values are significantly different to zero (using t-tests), if they are then this indicates that the variable makes a significant contribution to the regression model. In multiple regression standardised B values are used called beta values (β), these are normally used in the interpretation of results as they enable direct comparisons to be made between variables because they do not depend on the unit of measurement (Field, 2006).

Several authors have discussed the issue of sample size in regression and as a result this has led to the existence of several rules of thumb, such as 10 cases per predictor or 15 cases per predictor. However, as Field (2006) indicates this oversimplifies the issue and ignores the issue of effect size. Others (e.g. Green, 1991) offer formulae for calculating the number needed depending on whether attempting to just test the fit of the regression model ($50 + 8k$) or the individual predictors within the model ($104 + k$) where k is the number of predictors. The sample size used here satisfies both of Green's (1991) formulae.

9.2.1 Measures

The measures used in the studies described below are detailed here.

9.2.1.1 Control Variables:

Demographics:

Data on age and gender were gathered because the literature suggests these variables are related to the outcome variables under consideration (job satisfaction and organisational commitment). Age categories (16-25, 26-35, 36-45, 46-55, 56+) were used rather than asking for exact age to maximise responses. As age was measured using five categories this variable was dummy coded and the respective dummy variables used in the regression analysis.

9.2.1.2 Outcome Variables:

Job Satisfaction

The 15-item measure developed by Warr, Cook and Wall (1979) was used to measure job satisfaction. Items are rated on a 7 point scale where 1 = extremely dissatisfied and 7 = extremely satisfied. The scale can be split to measure intrinsic and extrinsic satisfaction separately however it was not felt to be necessary in this study because of the nature of career anchors and their inclusion of both the internal and external career. Therefore the total job satisfaction score was used. This measure was selected as it has been extensively used in the UK to measure job satisfaction. Alpha coefficients reported by Warr et al. (1979) for this scale range from 0.85 to 0.88.

Organisational Commitment

The 9-item measure developed by Cook and Wall (1980) was used to measure organisational commitment. The measure is based on 3 facets of commitment: Organisational Identification, Organisational Involvement and Organisational Loyalty. Items are rated on a 7 point scale where 1 = No, I strongly disagree and 7 = Yes, I strongly agree. Alpha coefficients for this scale reported by Cook and Wall (1980) range from 0.80 to 0.87.

9.2.1.3 Predictor Variables:

Career Anchors

The 39-item COI was used as described in chapter 5 and provided in Appendix 5. Alpha coefficients for the scales range from 0.59 to 0.83. Test re-test reliabilities range from 0.68 to 0.89.

Objective Fit

Objective fit was measured by calculating a fit index for each participant involved in this study. The fit index represented fit between participant career anchor profile and their job role career anchor profile calculated in chapter 8. Coefficient r_p developed by Cattell (1949) was used as the measure of objective fit. The mean sten profile for each job was used as the group profile (see Table 9.2) and these were calculated from the norms in Table 9.1. The norms were derived from the participants described in chapter 5 of this thesis (n=658). As a reminder these participants were taken from a variety of UK based organisations. Whilst it could be argued that it is most appropriate to use norms derived from the Career Anchor Job measure this was not appropriate for two reasons:

- 1) The sample available to base career anchor job measure norms on was relatively small compared to that available for the COI.
- 2) When comparing job profiles with individual profiles it necessitates the use of a common norm set. The original sample was deemed most appropriate as it represented a much larger number of participants.

Table 9.1 Norms from the COI based on chapter 5 sample

Sten	TF	GM	AU	SE	CR	SV	PC	LS
1	6-11	6	6-9	6-10	6	6-9	6-8	6-11
2	12-13	7	10-11	11-12	7	10-12	9-11	12-13
3	14-15	8-9	12-14	13-14	8-10	13-14	12-13	14-16
4	16-18	10-11	15-16	15-17	11-12	15-17	14-15	17-18
5	19-20	12-14	17-18	18-19	13-15	18-20	16-17	19-21
6	21-22	15-16	19-21	20-22	16-17	21-22	18-20	22-24
7	23-24	17-19	22-23	23-24	18-20	23-25	21-22	25-26
8	25-26	20-21	24-25	25-27	21-23	26-27	23-24	27-28
9	27-28	22-24	26-28	28-29	24-25	28-29	25-26	29
10	29-30	25-30	29-30	30	26-30	30	27-30	30

Table 9.2 Sten scores of job characteristics by job role

Job	TF	GM	AU	SE	CR	SV	PC	LS
Caseworker	2	3	3	5	4	5	4	5
General Support Clerk	2	3	3	5	2	4	2	5
Call Taker	7	3	3	5	5	7	5	5
CMC Supervisor	5	6	2	7	5	7	5	6
Communications Operator	5	6	2	6	4	6	4	5
CSO	4	2	4	6	7	7	5	4
Forensic Investigator	6	3	3	6	4	6	5	3
Counter Clerk	3	3	3	6	4	5	4	4
PSD Operator	5	3	2	6	5	5	5	3

The group profile for each job was then matched against the individual participants using the equation given by Cattell, Eber & Tatsuoka. (1970, p.141).

$$r_p = \frac{(4K + \sum D^2) - {}_1^k \sum d_2^2}{(4K + \sum D^2) + {}_1^k \sum d_2^2}$$

Where K = the median chi square value for k degrees of freedom (k being the number of profile elements).

K = median chi-square for 8 degrees of freedom = 7.344 (taken from Table C p.301 Cattell et al., 1970).

${}_1^k \sum d_2^2$ = sum of sten score differences of the two profiles over the k elements.

$\sum D$ = the difference between the job group mean sten and the population mean sten of 5.5.

An example of the calculation of r_p for 1 caseworker is shown in Table 9.3.

The range of r_p for all the participants was from -0.62 to +0.96 with a mean of 0.20 and a standard deviation of 0.28. This indicates that the job and individual profiles ranged from being quite dissimilar to being very similar.

Table 9.3 Calculating r_p

	TF	GM	AU	SE	CR	SV	PC	LS
Caseworker Sten	2	3	3	5	4	5	4	5
Caseworker 1	1	3	1	4	1	7	6	6
d ₂	1	0	2	1	3	-2	-2	-1
d ₂ ²	1	0	4	1	9	4	4	1
$\sum_{i=1}^k d_2^2$	24							
D	2 - 5.5 = -3.5	3-5.5 =-2.5	3-5.5 = -2.5	5-5.5 = -0.5	4-5.5 = -1.5	5-5.5 = -0.5	4-5.5 = -1.5	5.5.5 = -0.5
D ²	12.25	6.25	6.25	0.25	2.25	0.25	2.25	0.25
$\sum D^2$	29.75							
$r_p = \frac{(29.38+29.75) - 24}{(29.38+29.75) + 24}$								
$r_p = 35.13$								
<hr/> 83.13								
$r_p = 0.42$								

Subjective Fit

In the measurement of subjective fit both person job (P-J) and person organisation (P-O) fit were considered using two direct questions. After receiving their own career anchor profile individuals were asked:

“How well do you think your career anchors are suited to your job?”

To assess P-J fit and

How well do you think your career anchors are suited to the organisation?”.

To assess P-O fit.

Both questions were asked to enable examination and comparison of both types of fit within the career anchor model. Cable and DeRue (2002) suggest that both types of fit are important as successful employees must fit the job and the organisation.

Individuals were asked to rate these statements from 1 (not at all) to 7 (very well suited). A similar approach to the measurement of subjective fit was taken by Lovelace and Rosen (1996) in their study of fit amongst managers and Erdogan and Bauer (2005) in their study of the effects of proactive personality on career benefits.

9.2.1.4 Career Salience

Allen and Ortlepp's (2004) 11-item measure of career salience was used. The chosen measure explicitly separates work and career salience, which was deemed to be important as the focus in this study, is solely on career salience. The items are rated on a 7 point scale ranging from 1 = strongly disagree to 7= strongly agree. Allen and Ortlepp (2004) report an alpha coefficient of 0.83 for the scale.

9.2.2 Objective fit procedure and sample

Heads of four departments within the host organisation were contacted. These departments had already agreed to take part in an earlier part of the research through the expert panel. The department heads agreed to distribute online measures to individuals in each of the specific job roles (see chapter 8).

184 useable responses were received from the relevant departments. The numbers of respondents per job are listed in Table 9.4. Of these 101 indicated that they had taken part in a previous stage of this study.

Table 9.4 Responses by job role for objective fit study

Job Title	Number of respondents
Caseworker	18
General Support Clerk	11
Call Taker	26
CMC Supervisor	8
Communications Operator	29
CSO	36
Forensic Investigator	19
Counter Clerk	16
PSD Operator	21

9.2.3 Subjective fit procedure and sample

Data for these studies were collected through the Police Staff union members e-mail distribution list via the union head. Upon receipt of a completed COI the researcher sent participants a career anchor profile and asked the two subjective fit questions.

The data were obtained from a sample of 122 members of Police Staff from within the host organisation. Length of service ranged from 15 months to 43 years, 63%

were female. No individuals in this stage had taken part in any previous part of this research.

9.3 Results

The results for the objective and subjective measurements of fit are presented together within this results section and organised by hypothesis. Means, standard deviations and intercorrelations between the variables for each sample are shown in Tables 9.5 and 9.6.

9.3.1 H9.1a Demographics will explain a significant proportion of the variance in job satisfaction

This hypothesis can only be tested using the objective fit sample because demographic data were not collected in the subjective fit study. A standard multiple regression analysis was used to assess the relationship between demographics and job satisfaction. The demographics used in the model were age and gender. As age was measured using five categories this variable was dummy coded and the respective dummy variables used in the regression analysis. Before the regression was undertaken a number of assumptions were checked as recommended by Field (2006).

Firstly the cases to IV ratio were examined to ensure the sample size meant that the results would be meaningful. 5 IVs are used in this analysis therefore using Green's (1991) rule of thumb for testing individual predictors; $n \geq 104 + k$ where k is the number of predictors we need at least $104 + 5$ cases (109). This condition has been met as $n = 184$.

The correlation matrix was assessed and no substantial correlations ($r > 0.9$) between predictors were found. Therefore it was assumed the data did not exhibit multicollinearity and this assumption had been met. The Durbin Watson statistic for these data was 1.84, which is between 1 and 3, and close to 2 therefore according to Field (2006) means the assumption of independent errors has been met.

Table 9.5 Descriptive statistics and intercorrelations for the objective fit sample

	Mean	SD	Age1	Age2	Age3	Age4	Sex	TF	GM	AU	SE	CR	SV	PC	LS	r _p	JS	OC	CS
Age1	022	.48	X	-.33	-.31	-.25	.11	.71	.07	.07	.21	-.07	.06	.01	.16	-.06	-.25	-.04	-.10
Age2	028	.42		X	-.36	-.29	.22	-.02	.22	.02	-.16	.05	.01	.10	-.07	-.08	-.05	.03	-.01
Age3	026	.45			X	-.27	-.08	-.01	-.10	-.13	-.01	-.04	-.07	-.16	-.10	.17	-.80	-.4	.04
Age4	018	.43	X			X	-.27	.01	.01	.09	.06	.07	-.01	.06	.03	-.01	-.01	.12	-.01
Sex	1.62	0.49					X	.02	.03	-.08	.04	.01	.14*		-.13*	.01	.06	.01	-.01
TF	19.78	3.70						X	.23**	.11	.30**	.10	.18*	.38**	.13	-.41***	-.07	.02	-.08
GM	15.65	5.50							X	.31***	.12	.40***	.36***	.39***	-.03	-.57***	-.14	-.01	.10
AU	17.26	4.15								X	0.11	.50***	.29***	.31***	.40***	-.41***	-.02	.10	-.11
SE	24.08	3.76									X	-.09	.16**	.11	.2**	-.14	.16*	.08	.17*
CR	14.04	4.57										X	.31***	.040***	.12	-.39***	-.01	.12	.03
SV	23.64	3.99											X	.62***	.22***	-.50***	.12	.08	.02
PC	22.64	4.33												X	.20**	-.70***	-.07	.18**	.00
LS	23.47	3.89													X	-.39***	.08	.03	-.20**
r_p	0.20	0.28														X	.23	-.7	.06
JS	61.42	12.39															X		
OC	42.96	6.16																X	
CS	47.07	13.99																	X

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 9.6 Descriptive Statistics and intercorrelations for the subjective fit sample

	Mean	SD	GM	AU	SE	CR	SV	PC	LS	PJ	PO	JS	OC	CS
TF	19.79	4.30	.04	.16	.33*	.15	.29*	.39*	.15	.03	.04	-.01	-.05	.01
GM	15.62	5.50		.35	-.04	.46**	.34*	.26*	-.02	-.13	-.13	.00	.00	.03
AU	16.93	4.41			.10	.49**	.28*	.24*	.33*	-.03	-.08	.16	.09	.11
SE	24.27	3.34				-.10	.10	.10	.17	.13	.12	-.10	-.02	-.08
CR	14.28	4.75					.38**	.35	.21*	-.18*	-.17	.06	.03	.04
SV	23.39	4.09						.63**	.20*	-.03	-.06	-.12	-.14	-.07
PC	23.21	3.98							.23*	-.02	-.07	-.15	-.14	-.07
LS	23.18	4.73								.15	.04	.08	.04	-.03
PJ	5.06	1.27									.81**	.18*	.19*	.16
PO	5.02	1.24										.10	.11	.08
JS	65.59	11.79											.56**	.19*
OC	43.38	6.88												.52**
CS	46.61	14.35												

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The data were assessed for outliers using casewise diagnostics. Field (2006) suggests that within a sample it can be expected that 5% of cases will have standardised residuals of ± 2 and 1% of ± 2.5 . Within this data set only 2 (1%) cases had standardised residuals of ± 2 and none with ± 2.5 . Therefore these diagnostics give no cause for concern. Finally the histogram and normal probability plots were examined. These indicated normally distributed residuals and no sign of heteroscedasticity.

Analysis of the regression model did not show R to be significantly different from zero therefore no support for H9.1a was found (see Table 9.7).

9.3.2 H9.1b Demographics will explain a significant proportion of the variance in organisational commitment

The same analysis as described above was used to test H9.1b. Demographics were not found to be a significant predictor of organisational commitment therefore no support was found for this hypothesis (see Table 9.7).

Table 9.7 Multiple regression analysis, demographics predicting outcomes.

	Job Satisfaction	Organisational Commitment
Gender	.07	.04
16-25 vs 26-35	-.01	.11
16-25 vs 36-45	-.14	.18
16-25 vs 46-55	-.14	.13
16-25 vs 56+	-.06	.25

Shows standardised beta values

9.3.3 H9.2a Career anchor congruence will explain a significant proportion of the variance in job satisfaction.

(i) Objective fit sample

A standard regression model was used to assess this relationship with fit entered as predictor and job satisfaction as the DV. The assumptions described above were examined again and no violations found. Analysis of the regression model indicates that fit is a significant predictor of job satisfaction as R is significantly different from zero, $F(1,180) = 7.73$, $p < 0.01$. Fit accounted for 4.1% of the variance in JS providing some support for H9.2a (see Table 9.8).

(ii) Subjective fit sample

A standard regression model was used to assess the relationship between fit and job satisfaction with perceived PJ fit entered as predictor and job satisfaction as the DV. The assumptions for regression were examined again and no violations found. Analysis of the regression model showed that R was significantly different from zero $F(1,120) = 3.92, p < .05$. In this model fit accounted for 3.2% of the variance in JS (see Table 9.8).

The same approach to analysis was used with perceived PO fit. No relationships were found so partial support for H9.2a was found using the subjective fit sample (see Table 9.8).

9.3.4 H9.2b Career anchor congruence will explain a significant proportion of the variance in organisational commitment.

(i) Objective fit sample

The same analysis was applied to test H9.2b. In this analysis fit was not found to be a significant predictor of OC therefore no support was found for H9.2 with this sample (see Table 9.8).

(ii) Subjective fit sample

A second regression model was set up to assess the role of perceived PJ fit in predicting OC. This time analysis of the model showed that R was significantly different from zero $F(1,120) = 4.56, p < 0.05$. Fit accounts for 3.7% of the variance in OC (see Table 9.8).

The same approach to analysis was used with perceived PO fit. No relationships were found so partial support for H9.2a was found using the subjective fit sample (see Table 9.8).

Table 9.8 Multiple regression analysis, fit predicting outcomes

Job Satisfaction		Organisational Commitment
Objective Fit	P-J	.20**
Subjective Fit	P-J	.18*
	P-O	.10

Shows standardised beta values

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

9.3.5 H9.3a Career anchors will explain a significant proportion of the variance in job satisfaction.

(i) Objective fit sample

A standard regression model was used to assess this relationship with career anchors entered as predictors and job satisfaction as the DV. All career anchors were entered into the equation simultaneously.

Analysis of the regression model indicates that career anchors alone are significant predictors of job satisfaction as R is significantly different from zero; $F(8,173) = 2.64$, $p < 0.05$. Four of the anchors made a significant contribution to the prediction of job satisfaction; GM, SE, SV & PC. In total 10% of the variance in JS was predicted by career anchors providing support for H9.3a (see Table 9.9).

(ii) Subjective fit sample

A standard regression model was used to assess the direct effects of career anchors on outcome variables. Firstly career anchors were entered as predictors and job satisfaction as the DV. All career anchors were entered into the equation simultaneously. Assumptions for regression analysis were checked and no violations found.

Analysis of the regression model showed no support for this relationship as R was not significantly different from zero. Therefore within the subjective fit sample no support was found for H9.3a (see Table 9.9).

9.3.6 H9.3b Career anchors will explain a significant proportion of the variance in organisational commitment.

(i) Objective fit sample

The same analysis was used to test H9.3b. In this analysis career anchors were not found to be a significant predictor of organisational commitment (see Table 9.9).

(ii) Subjective fit sample

Analysis of a second regression model with OC as the dependent variable showed no relationship between career anchors and organisational commitment as R was not significantly different from zero (see Table 9.9).

As no significant relationship was found between career anchors and either of the outcome variables using the subjective fit sample it was not possible to test for moderation effects in H9.4 using the subjective measure of fit.

Table 9.9 Multiple regression analysis, career anchors predicting outcomes

	Objective fit		Subjective fit	
	Job Satisfaction	Organisational Commitment	Job Satisfaction	Organisational Commitment
TF	-.19*	-.08	-.09	-.06
GM	-.06	-.14	-.02	-.12
AU	-.07	.05	-.03	.04
SE	-.20**	.11	-.11	.06
CR	.12	.09	.09	.03
SV	.25**	-.06	.10	-.05
PC	-.19*	.17	-.08	.12
LS	.04	-.06	.02	-.04

Shows standardised beta values

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

9.3.7 H9.4a Congruence will moderate the relationship between career anchors and job satisfaction.

(i) Objective fit sample

In order to statistically test the effect of the moderator the procedure recommended by Baron and Kenny (1983) and used by many other researchers (e.g. Busemeyer & Jones, 1983; Francis-Smythe & Robertson, 2003; Moyle, 1995) was employed. This suggests that both the predictor and moderator should be regressed on to the DV, then the interaction term, defined as predictor x moderator, is regressed on to the DV. A significant moderation effect can be said to exist when the regression of the interaction term is significant while the predictor and moderator are controlled. As recommended by Frazier, Baron and Tix (2004) the variables were standardised before they were used in the regression to reduce the likelihood of encountering issues related to multicollinearity. A hierarchical multiple regression model was set up with job satisfaction entered as the dependent variable, the control variables of age and gender were entered in the first block, the COI subscales as the second block, r_p as the third and the interaction terms ($r_p \times TF$, $r_p \times GM$, $r_p \times AU$, $r_p \times SE$, $r_p \times CR$, $r_p \times SV$, $r_p \times PC$, $r_p \times LS$) as the fourth. Independent variables were forced to enter the regression equation. This is the method suggested by Baron and Kenny (1986).

The results of the regression model analysis are shown in Table 9.10, this indicates the regression model accounts for 24% of the variance in JS. Examining each step of the model shows that the control variables (gender and age) account for 2% of the

variance although this is not significant. Addition of the COI scales contributes a further 11% of the variance explained. Whilst the career anchors as a block did not predict JS the results show that GM, SE and SV contributed significantly ($p < .05$) to the prediction of JS over and above the contribution made by the control variables. Addition of fit contributed an additional 6% of the variance and was significant at $p < .001$.

When considering the role of career anchor congruence as a moderator the contribution of the interaction terms needs to be examined. The results shown in Table 9.7 suggest that this step explains an additional 5% of the variance in JS over and above the previous models. However, examination of the individual contribution of each of the interaction terms shows that only CR and SV are acting as moderators. Therefore only partial support has been found for H9.4a.

9.3.8 H9.4b Congruence will moderate the relationship between career anchors and organisational commitment.

(i) Objective

As no significant results were found for career anchors or fit as a predictor of organisational commitment it was not possible to test for moderator effects.

(ii) Subjective

As no significant results were found for career anchors or fit as a predictor of organisational commitment it was not possible to test for moderator effects.

9.3.9 H9.5a Career salience will moderate the relationship between congruence and job satisfaction.

(i) Objective fit sample

To test hypothesis H9.5 illustrated as model 2 in Figure 9.1 a hierarchical multiple regression model was set up with job satisfaction entered as the dependent variable. The control variables of age and gender were entered in the first block, r_p as the second block, CS as the third block and the interaction terms ($r_p \times CS$) as the fourth. Independent variables were forced to enter the regression equation.

Table 9.10 Multiple regression analysis, objective fit as a moderator of the relationship between career anchors and job satisfaction

Variables	DV = Job Satisfaction			
	Step 1	Step 2	Step 3	Step 4
Age1	-.01	-.03	-.08	-.11
Age2	-.14	-.13	-.15	-.15
Age3	-.14	-.20	-.24	-.25
Age4	-.06	-.08	-.11	-.14
Gender	.07	.04	.02	.02
TF		-.05	.04	-.04
GM		-.20*	-.05	-.02
AU		-.09	-.08	-.15
SE		.19**	.18*	.20*
CR		.14	.14	.08
SV		.25**	.26**	.26*
PC		-.21	-.18	-.23
LS		.03	.15	.14
r_p			.43***	.58**
R_p x TF				.10
R_p x GM				.34
R_p x AU				-.01
R_p x SE				-.36
R_p x CR				-.69*
R_p x SV				-.96*
R_p x PC				-.13
R_p x LS				.71
Model R2	.02	.13*	.19***	.24**
ΔR²		.11	.06.	.05

Shows standardised beta values

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The results of the regression model analysis are shown in Table 9.8. This indicates the regression model accounts for 9% of the variance in JS. Examining each step of the model shows that the control variables (gender and age) account for 2% of the variance although this is not significant. Addition of the r_p contributes a further 5% of the variance explained and was significant at $p < .001$. Addition of career salience contributed an additional 2% of the variance and was significant at $p < .001$.

When considering the role of career salience as a moderator the contribution of the interaction terms needs to be examined. The results suggest that this step explains no additional percentage of the variance in JS over and above the previous models. Therefore within this sample career salience is not acting as a moderator of the direct effects of fit on job satisfaction and no support is found for H9.5a. However, the results do show that career salience has a direct effect on job satisfaction (see Table 9.11).

(ii) Subjective fit sample

No relationship was found between perceived PO fit and job satisfaction therefore only perceived PJ fit can be considered here. To test H9.5 using subjective PJ fit the same approach was taken as described for the objective fit study, however, no demographic data were gathered for this sample therefore fit was entered in step one, career salience in step two and the interaction term in step three. The results are shown in Table 9.9.

Table 9.11 shows no evidence for the role of career salience as a moderator of the relationship between PJ fit and job satisfaction so no support for H9.5a has been found with this sample. What it does show is that career salience has a direct effect on job satisfaction predicting 6% of the variance.

9.3.10 H9.5b Career salience will moderate the relationship between congruence organisational commitment.

(i) Objective fit sample

As no significant relationship was found between fit and organisational commitment when using the objective fit measure it was not possible to test for moderation effects.

(ii) Subjective fit sample

The same analysis approach as described above was used with organisational commitment as the dependent variable. The results are shown in Table 9.12. No evidence for the role of CS as a moderator was found but career salience was shown to have a direct effect on organisational commitment, predicting 25% of the variance.

Table 9.11 Career salience as a moderator of the relationship between fit and job satisfaction using the objective measure of fit

Variables	DV = Job Satisfaction			
	Step 1	Step 2	Step 3	Step 4
Age1	-.01	-.00	-.03	-.03
Age2	-.13	-.13	-.16	-.16
Age3	-.14	-.18	-.21	-.21
Age4	-.06	-.07	-.09	-.09
Gender	.01	.06	.06	.07
r_p		.22***	.23***	.40*
CS			-.13*	-.13*
r_p x CS				-.18
Model R2	.02	.07	.09	.09
ΔR²		.05**	.02*	.00

Shows standardised beta values

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 9.12 Career Salience as a moderator of the relationship between fit and outcomes using the subjective measure of fit

Variables	DV = Job Satisfaction			DV = Organisational Commitment		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
PJ Fit	.18*	.15	.01	.19*	.11	.07
CS		.17*	.02		.51***	.25
PJ Fit x CS			.26			.34
Model R2	.03*	.06*	.06	.03	.28***	.29
ΔR²		.03	.00		.25	.01

Shows standardised beta values

Key: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

9.3.11 Objective fit sample summary of results

No support was found to suggest that demographics, measured as age and gender, predicted either job satisfaction or organisational commitment within the current sample. This analysis has shown that both career anchors and the objective measurement of fit predict a proportion of the variance in job satisfaction in the current sample (10% and 4% respectively). The specific career anchors involved in the prediction of job satisfaction were GM, SE, SV and PC. No evidence was found to suggest that either career anchors or objective fit predict organisational commitment. Some support was found to suggest that fit could act as a moderator of the relationship

between career anchors and job satisfaction. Specifically congruence relating to the career anchors CR and SV were shown to be acting as moderating variables. No evidence was found to suggest that career salience acts as a moderator of the relationship between fit and job satisfaction. However, career salience was shown to predict approximately 2% of the variance in job satisfaction.

9.3.12 Subjective fit sample summary of results

Perceived person job fit was found to predict approximately 3% of the variance in job satisfaction and 4% of the variance in organisational commitment. No direct effects of fit on organisational commitment were found. Similarly, no direct effects were found between career anchors and either job satisfaction or organisational commitment. No evidence was found to support the role of career salience as a moderator of the relationship between subjective fit and either job satisfaction or organisational commitment. However, career salience was found to predict approximately 6% of the variance in job satisfaction and 25% of the variance in organisational commitment.

9.4 Chapter Summary

Table 9.13 shows a summary of all the findings from the congruence studies reported in this chapter. This section discusses the findings in relation to the relevant hypotheses.

H9.1a Demographics will explain a significant proportion of the variance in job satisfaction

H9.1b Demographics will explain a significant proportion of the variance in organisational commitment

These hypotheses were tested using only the objective fit sample as no demographic data were collected for the subjective fit sample. No support was found for this hypothesis within this sample.

H9.2a Career anchor congruence will explain a significant proportion of the variance in job satisfaction.

Support was found for this hypothesis using the objective measure of fit where this contributed 4.1% of the variance in job satisfaction. Partial support was found using subjective measures of fit where perceived P-J fit accounted for 3.2% of the variance in job satisfaction but perceived P-O fit was not related to job satisfaction. This finding also shows that the objective measure of fit has greater predictive power than the subjective measure (4.1% compared to 3.2%) in predicting job satisfaction scores.

However, in both samples fit only accounts for a small percentage of the variance with approximately 95% of the variance in job satisfaction being due to factors other than fit.

H9.2b Career anchor congruence will explain a significant proportion of the variance in organisational commitment.

No support was found for this hypothesis using the objective measure of fit. Partial support was found using the perceived measure of P-J fit which accounted for 3.7% of variance in organisational commitment. Perceived P-O fit was not found to be predictive of organisational commitment. For this hypothesis it appears that the subjective measure of P-J fit shows greater predictive power than the objective measure in predicting organisational commitment. Again only a small proportion of the variance in organisational commitment was predicted. It could be suggested that perceived P-J fit is more likely to be linked to aspects of the organisation. This may be why perceived P-J fit shows greater predictive power for organisational commitment than the objective PJ fit measure in this instance. Previous research has suggested it is difficult to ascertain exactly what is being measured in subjective fit research (Judge, Cable, Williamson, Schurer Lambert & Shipp, 2006). Although in this study individuals were asked to rate how well their career anchors relate to the job individuals may have been including aspects of the organisation in their evaluation.

H9.3a Career anchors will explain a significant proportion of the variance in job satisfaction.

This hypothesis examines the direct effect of career anchors on job satisfaction independently of fit. Partial support was found for this hypothesis using the sample from the objective fit study. Specifically the career anchors GM, SE, SV and PC were found to contribute to the prediction of job satisfaction (10%). No support was found for this hypothesis using the sample used in the subjective measure of P-J or P-O fit.

Four career anchors were found to predict job satisfaction in the objective fit sample. The beta values indicate that there is a positive relationship between job satisfaction and SV and SE and a negative relationship between job satisfaction and GM and PC. Finding a direct relationship between career anchors and job satisfaction with one sample but not the other makes drawing conclusions from these data difficult. This is discussed further in chapter 10, section 10.1.

H9.3b Career anchors will explain a significant proportion of the variance in organisational commitment.

No support was found for this hypothesis with either sample for P-J or P-O fit. This indicates that career anchors alone do not predict organisational commitment.

H9.4a Congruence will moderate the relationship between career anchors and job satisfaction.

This hypothesis was explored only within the sample used in the objective fit study. This is because no relationships were found between career anchors and job satisfaction in the subjective fit sample. As such it is not possible to investigate the effects of a moderator.

Partial support was found for this hypothesis as the P-J fit for CR and SV was found to be acting as a moderating variable. This finding suggests that fit impacts upon the strength of the relationship between career anchors and job satisfaction. No evidence was found to suggest that the remaining six career anchors played a role in moderating this relationship. Possible reasons for this are that CR and SV are the most important anchors in this particular context. CR is related to entrepreneurial creativity and the analysis in chapter 8 showed that this anchor is not well provided for by the jobs within the host organisation. Therefore it may be that if individuals have good profile fit on the seven other anchors but not on CR this has a real impact on job satisfaction over and above the impact of fit on the other anchors. SV is related to the feeling of providing for the community in one's career. Within the host organisation this anchor received relatively high scores for the nine jobs being considered. Therefore presumably this anchor is important to most of these roles and incongruence on this anchor has a particularly strong impact upon an incumbent's job satisfaction.

H9.4b Congruence will moderate the relationship between career anchors and organisational commitment.

It was not possible to test this relationship with either the objective or subjective fit sample because no relationship was found between career anchors and organisational commitment.

H9.5a Career salience will moderate the relationship between congruence and job satisfaction.

This hypothesis was tested using objective fit and perceived P-J fit. No relationship was found between perceived P-O fit and job satisfaction so it was not possible to investigate the role of career salience as a moderator.

No support was found for this hypothesis with objective or perceived P-J fit. However, the results of the hierarchical regression analysis show that career salience has a direct effect on job satisfaction in both samples. Career salience was shown to predict 2% of the variance in job satisfaction in the objective fit sample and 6% of the variance

in the subjective fit sample. Greenhaus (1971) suggested that individuals with high career salience were more likely to experience congruence because they will invest more time in their career decisions. The data reported here are contrary to this suggestion. Instead it could be argued that individuals with high career salience are more likely to experience high levels of job satisfaction because they have spent more time considering their career choices. This is discussed further in chapter 10, section 10.1.

H9.5b Career salience will moderate the relationship between congruence organisational commitment.

This hypothesis was examined using the perceived P-J fit measure only because no relationships were found between objective fit or perceived P-O fit and organisational commitment.

The results of the hierarchical regression do not support this hypothesis but a direct effect of career salience on organisational commitment is shown. Within the subjective fit sample career salience predicts 25% of the variance in organisational commitment. This finding is discussed in chapter 10, section 10.1.

This chapter provides a comprehensive examination of congruence and the career anchor model. It provides evidence to suggest that career anchors, objective and subjective congruence all contribute independently to the prediction of job satisfaction. The data also indicates that subjective congruence contributes to the prediction of organisational commitment. Some support for the role of congruence as a moderator of the relationship between career anchors and job satisfaction was found. Finally the data also shows that career salience has a direct effect on both job satisfaction and organisational commitment. These findings are discussed in more detail in chapter 10, section 10.1.

Table 9.13 Summary of career anchor congruence findings

Hypothesis	a) Job Satisfaction		b) Organisational Commitment	
	Objective fit	Subjective fit	Objective fit	Subjective fit
H9.1 Demographics will explain a significant proportion of the variance	NS	N/A	NS	N/A
H9.2 Career anchor congruence will explain a significant proportion of the variance	4.1%	PJ - 3.2% PO - NS	NS	PJ – 3.7% PO = NS
H9.3 Career anchors will explain a significant proportion of the variance	10% (GM, SE, SV, PC)	NS	NS	NS
H9.4 Congruence will moderate the relationship between career anchors and outcomes	5% (CR, SV)	N/A	N/A	N/A
H9.5 Career salience will moderate the relationship between congruence and outcomes.	NS	PJ – NS PO – N/A	N/A	PJ – NS PO – N/A
Direct effect of career salience	2%	6%	N/A	25%

Key – N/A = analysis not undertaken; NS = results of analysis $p > 0.05$ (not significant).

Chapter 10

Conclusions

The research presented within this thesis provides a thorough empirical examination of the careers orientation inventory (COI) as a measure of career anchors and explores career anchor congruence and its relationship to both job satisfaction and organisational commitment. This chapter summarises and discusses the research findings and addresses the limitations of the studies. Suggestions for future research are made before examining the contribution to the academic literature and the implications for practice that arise from this thesis. Finally, personal reflections on the research process are included.

10.1 Discussion of Research Findings and limitations

This section provides a summary of the research findings presented in this thesis. These findings are discussed in relation to previous research and acknowledgements of their limitations are made.

The research process began with a review of the literature on the career concept. This highlighted the changes that have and are still occurring in the world of careers. This literature review is presented in chapter 2. Reviewing the careers literature showed the number of facets related to the career concept and the variety models of careers that exist. The researchers aim was to find a model that would be broad enough to apply to new career realities and one that could be related to work outcomes such as job satisfaction.

Consideration of the various models of the career concept led the researcher to Schein's (1978) career anchor model. Career anchors are described as encompassing talents, values and motives. The anchor metaphor was developed as Schein (1978) believed these talents, values and motives pulled a person towards a certain career decision. The career anchor model comprises of eight different anchors (see chapter 3, Table 3.2). It is argued in this thesis that the model is broad enough to include aspects of the more traditional approach to careers such as need for hierarchical progression. Whilst at the same time it includes aspects of the current perspectives on careers such as taking a more holistic approach by considering issues of work life balance (Arnold, 2004). For this reason the career anchor model was chosen as the focus for this research. Despite the long history of the model and the number of published articles devoted to it a review of the literature revealed a number of significant gaps in knowledge of the model that has hindered its utility. A full

discussion of the review of the literature and the identified gaps is provided in chapter 3.

The literature review showed that career anchors are commonly measured by the career orientations inventory (COI), a self report questionnaire. A large proportion of the career anchor research to date has been concerned with investigating the factor structure of the career anchor model as measured by the COI. However, this literature uses a variety of versions of the COI, has been conducted with homogeneous, often small samples and has been carried out outside of the UK. The research described in chapter 5 conducted an analysis of the psychometric properties of the COI using a large sample of UK based working adults (n=658). The hypotheses it sought to address and the main findings are discussed in the following paragraphs.

H5.1 The COI is a suitable measure of the career anchors as proposed by Schein

Using a sample of UK based working adults (n=658) evidence was found to support Schein's belief in an eight factor structure measured by an adapted version of Igbaria and Baroudi's (1993) COI.

Several previous researchers have examined the factor structure of the career anchor model using versions of the COI and a variety of factor structures have been reported ranging from three to 11 (e.g. Igbaria, Greenhaus & Parasuraman, 1991; Crepeau, Cook, Goslar & McMurtrey, 1992; Jiang & Klein, 1999; Ramakrishna & Potosky, 2003). The main finding of previous research that differs from the results presented here is that the security anchor as proposed by Schein (1978) should be split in two. This split results in a geographical security anchor, referring to a desire to remain in one location for one's career and an organisational security anchor, referring to a desire to remain within one organisation for their career. No evidence to support the notion of splitting this anchor in two was found in the data analysed here. One possible reason for this is the nature of the sample. The sample used in the current research does not suffer from range restriction in the same way as that gathered in previous studies where data were gathered from just one organisation (e.g. Ramakrishna & Potosky, 2003), one university (e.g. DeLong (1982) or one profession (e.g. Jiang & Kline, 1999). Instead the current sample consisted of individuals from a wide range of organisations and a wide range of occupations which possibly resulted in a greater range of responses to the questions on the COI.

A second possible reason for the eight factor structure found here could be due to the nature of the questions in the version of the COI employed. It could be argued that the reason for the relatively clean factor structure found within this sample is due to the

repetitive nature of the questions in this version of the COI (see Appendix 5). Cattell (1978) refers to this as 'bloated specifics' where over inclusion of similar items results in appearance of a factor that may have no practical relevance. However, when examining internal consistency each item was found to be contributing separately to its relevant scale suggesting perhaps that they are all measuring something slightly different. However, the use of Cronbach's alpha as a measure of internal consistency has been criticised. Kline (1979) suggests that there is an optimal range of internal consistency levels of between 0.3 and 0.7. Any lower than 0.3 and items are likely to be measuring something very different and any higher than 0.7 indicates items that are paraphrases of each other. 7 out of 8 of the Cronbach's alpha figures for the COI in this study are between 0.7 and 0.8 so according to Kline's (1979) criteria this would be outside of the optimal range. However, Boyle (1991) indicates that test scales should correlate positively with criterion rather than test items with each other to ensure the validity of the factor structure. Several of the analyses discussed later in this chapter help to provide support for the factor structure evidenced in chapter 5. For example demographic differences are reported in chapter 6 in line with previous literature and relationships between the suggested factors and work related outcomes are found in chapter 9. This provides support for the validity of this factor structure within the current sample.

The results reported here do not resolve the issues concerning the factor structure of the career anchor model as measured by the COI. It could be suggested that this research simply raises more questions concerning the definitive latent structure. There is a need for more research to be conducted on large and varied samples, using a consistent measure of the COI, before any definite agreement can be made concerning the model's structure when measured in this way. This is discussed in section 10.2.2. In conclusion it can be said that evidence is found to support H5.1 within the current sample.

H5.2: The COI exhibits acceptable reliability levels to warrant its description as a psychometric test.

Two approaches were taken to the examination of the COI's reliability. Firstly internal consistency was measured using Cronbach's alpha, secondly test-retest reliability over a two week period was examined.

Levels of internal consistency found with this sample ranged from 0.59 to 0.83. This is consistent with the findings from previous studies using the COI (e.g. Brindle &

Whapham (2003a); Custido (2000). Field (2006) and Schmidt (1993) indicate that alpha levels of 0.7 or above are generally deemed as acceptable. However, as discussed above Kline (1979) indicates that there is an optimal range of internal consistency coefficients from 0.3 to 0.7. Cortina (1993) demonstrates that alpha levels can be increased by increasing the number of items in a test adding more evidence that these statistics should be interpreted with caution. Cronbach's alpha is widely used as a measure of the internal consistency (often termed internal reliability) of psychometrics but the criticisms discussed above make it difficult to interpret this statistic. As such it can be concluded that the internal consistencies reported here are deemed acceptable according to Field (2006) and Schmidt's (1993) criteria but are outside the optimal range suggested by Kline (1979).

Test-retest reliability was examined over a two week period (n=52) and coefficients ranged from 0.68 to 0.89. The only other study using a version of the COI to report test-retest reliabilities was DeLong (1982) who found it ranged from 0.38 to 0.92. Lowenthal (1996) suggests that for scales with ten or fewer items a reliability of 0.6 is acceptable so the reliability found for all eight scales of the COI were deemed to be acceptable.

In conclusion the results of the analyses presented in chapter 5 provide some support for H5.2.

H5.3: The career anchors measured by the COI may change more with extreme life or work experiences than without them.

Schein (1978) believed that career anchors developed as individuals gathered work experience. Once an individual's career anchor was formed Schein (1978) thought this would be reasonably stable. Debate concerning the stability of values, such as those encompassed by career anchors, over time exists in the literature and is discussed in chapter 2, section 2.2.3.1. The data presented in chapter 5 examines the stability of career anchor scores as measured by the COI over a 12 month period (n=54). Participants were asked to identify any significant events that had occurred in either their personal or work lives in the period between test administrations. Analysis of the results showed that when the participants who reported a change (n=15) were removed from the analysis the test-retest reliability coefficients increased from a range of 0.43 to 0.70 to a range of 0.58 to 0.73. An increase in the reliability coefficient was seen for every subscale of the COI when these individuals were removed from the sample. Freeman (1962) suggests that changes over time in reliability coefficients for

values based measures reflect actual value changes rather than deficits in the measure. This provides some evidence to suggest that the reported events did have an impact on the stability of COI scores within these individuals.

However, the range of events reported was extremely varied (e.g. house move, marriage, redundancy) and collection of this information relied on self report. Other participants may have experienced similar events but decided not to include them in the open-ended section of the questionnaire. Despite these limitations closer inspection of the COI scores for the 15 individuals who reported a significant change shows that each of them has a change of 5 points or more on at least one of the career anchor subscales between testing periods. This was not replicated for individuals who had not reported a change. This suggests that when individuals reported a change that was significant to them there had also been a shift in their career anchor scores, as measured by the COI. To the author's knowledge this is the first data set that examines the changes in career anchor scores measured by the COI over time. The results from this analysis suggest that the stability of the careers over time is an area worthy of further investigation. This is considered in more detail in section 10.2.1.

H5.4 The COI will demonstrate an acceptable level of face and construct validity.

The availability of validity data for the COI as a measure of career anchors are limited. Face validity was examined here using a sample of 144 members of police staff from the host organisation. Participants were asked to comment on the accuracy of the career anchor profile they received and to indicate whether they felt this information would be useful to their line managers. The results presented in chapter 5 indicate that the majority of participants felt the profile to be an accurate representation of themselves and that it would be useful for their line manager to see their results. The approach taken to examining face validity is the same as used by Delprato (1975). However, this methodology is a limitation of this study as it makes it difficult to state whether participants are commenting on the face validity of the measure, the model or the output received. The fact that the results are based on participant ratings of the feedback received means that the Barnum effect may have been a factor. The Barnum effect refers to the fact that individuals are likely to rate generalised feedback from psychometrics as specific to them rather than as applicable to others as well (Johnson, Cain, Falke, Hayman & Perillo, 1985). Despite this possible limitation the results are a promising indication that the career anchor model was well received by individuals within the host organisation. Participants indicated that it would be useful for line managers to see their results from the COI. As discussed in chapter 2 line managers

are being encouraged to take on responsibility for their staffs' career development. It could be suggested that career anchors may form a useful framework to assist line managers in completing this task.

To assess the construct validity of the COI participants scores (n=76) were compared to scores on Mantech's (1983) Work Values Questionnaire (WVQ). Significant correlations were found between 3 of the WVQ sub scales and the career anchor subscales of the COI. Nunally (1978) states that construct validity is concerned with demonstrating functional relationships between variables. This can be in the form of convergent validity where variables measure similar constructs or divergent validity where instruments measure different constructs. Evidence for both are found in the comparison between the COI and WVQ. For example the SV career anchor is found to correlate with the WVQ relationships sub scale which contains items relating to contribution to society demonstrating convergent validity. No correlations are found between career anchors and the WVQ financial and working conditions subscale and this is to be expected. However, Wallis (2004) argues that this type of comparison between measures is not sufficient to assume construct validity as there is no guarantee that the construct under consideration is valid. Despite this the comparison of measures is the most commonly reported method in the assessment of construct validity. Considering the results presented in chapter 5 alongside Brindle and Whapham's (2003b) comparison of the COI to Super's work values questionnaire it is concluded that the COI does in fact demonstrate construct validity. This combined with the face validity data provide some support for H5.4.

Chapter 5 provides a reasonable level of evidence to support the use of the COI as a measure of career anchors. Chapter 6 builds on these findings by using the COI as a measure of career anchors to present the findings relating to the distribution of career anchors across a sample of UK working adults (n=658) and examines the role of age and gender on the career anchors held by this sample. The specific hypotheses tested in this chapter and the findings related to these are discussed below.

H6.1 The prevalence of career anchors within the current sample will be different to that found by Schein in his original study. Typically it is expected that there will be an increase in numbers of people with LS and AU career anchors as predicted by Schein (1996).

The anchor with the highest prevalence in this sample was LS (38%) and the lowest occurring anchor was GM (2%). Analysis of these results alongside Schein's original

research and subsequent research conducted by other authors indicates that there has been an increase in the number of individuals with LS as their primary anchor. No evidence for an increase in the number of individuals with the AU anchor was found. At the same time consideration was made of lowest scoring anchors amongst this sample. Arnold (2004) suggested that consideration of low scores in Holland's vocational preference model may provide important information about the type of work individuals should seek to avoid. This suggestion was transferred in this study to the career anchor model through the consideration of lowest scoring anchors. The data indicates that GM is the lowest scoring anchor for a large number of individuals in this sample (41.1%) with LS being the least frequently occurring lowest scoring anchor (3.9%).

These findings could be said to indicate that there has been a move away from the desire to pursue a more traditional career path by aiming for general management positions and management careers and a move towards a more protean career where success is defined on an individual basis. The findings reported in chapter 6 are consistent with career literature concerning the impact of new career realities on career values. For example, Heslin (2005) indicates that even among management graduates and those already in management roles the desire to achieve high levels of management seems to be decreasing. Similarly Arthur and Rousseau (1996) suggest that whilst management used to be something to which people aspired the term is being avoided all together within some organisations. Guest (2004) suggests that consideration of work life balance has become more important to both men and women as a response to workplace changes. The data concerning career anchor prevalence found in this sample seem to reflect these statements.

A significant limitation of these analyses relates to the fact that the samples being compared are not matched. Schein's original work was conducted with a sample of all male graduates from a management programme in the US whereas this sample was much broader demographically and from the UK. This makes it impossible to say for certain that there has been a change in the prevalence of certain career anchors based on these data alone. However, consideration of these findings alongside knowledge of the careers literature suggests that a move away from the GM anchor values and towards LS would not be unexpected. Many authors have suggested that in line with the new career realities that exist individuals are taking a more holistic perspective on their careers by incorporating lifestyle factors into their career decisions (e.g. Hall, 1996; Guest, 2004). However, more longitudinal research is needed to confirm this and is discussed in section 10.2.1.

A second limitation of these findings that relates to consideration of both higher and lower scoring anchors, concerns the nature of the sample used in this research. Whilst this sample was broader than that used in other studies on the career anchor model it still included a higher proportion of women, a higher proportion of people under the age of 35 and a higher prevalence of public sector workers than found in the total UK working population. In light of the career related gender differences discussed in chapter 2, section 2.2.3.2, this could have been a reason for the LS anchor being highly prevalent in this sample and the lower prevalence of the GM anchor.

Finally, it is suggested here that the low prevalence of the GM anchor could also suggest that this anchor needs to be revised to ensure it is still relevant to the workforce today. Currently the questions assessing GM on the COI relate strongly to senior management roles. Yet in his discussion of predictions concerning how career anchor prevalence may change Schein (1996) indicated that there would be an increase in demand for this anchor at lower levels of organisations, for example in team leader roles. If this is the case there needs to be some consideration of whether the GM anchor, measured in its current format is appropriate, this is discussed in more detail in section 10.2.2. In conclusion it can be said that the data provide partial support for H6.1.

H6.2: There will be significant differences between men and women in their scores on each of the career anchors as measured by the COI. More specifically the literature suggests that women will score higher on the LS career anchor and men on the PC, AU, GM career anchors.

H6.3: There will be significant differences between age groups in scores on each of the career anchors as measured by the COI. Typically, the literature suggests that younger age groups will score higher on the LS and SV career anchors and the older age groups will score higher on the GM and AU career anchors.

The results relating to these hypotheses will be considered together to enable consideration to be made of the interaction effects between gender and age. Some gender differences in the scores on the COI subscales were found within this sample (n=658). Specifically, men were found to score higher than women on GM, CR and PC and women scored higher than men on LS. No gender differences were found for the remaining career anchors so no evidence was found to suggest that as hypothesised men would score higher than women on the AU career anchor subscale. The findings related to GM, PC and LS are in keeping with the existing literature on the differences

between men and women's careers (e.g. Hakim, 2006). This literature indicates that men are more likely to be interested in pursuing a traditional management career path and more interested in objective career success which is defined partly by status (Powell & Mainiero, 1992). There is also research that suggests men are more competitive than women at work (Gneezy & Rustishini, 2004) which relates to the PC career anchor. Hakim (2006) suggests that women are more likely to take into account lifestyle factors when making career decisions than men. The finding that men scored higher than women on the CR career anchor was unexpected. Gupta, Turban, Wasti & Sikdar, (2009) showed that the characteristics of entrepreneurs were more likely to be associated with men than with women. However, their finding does not tell us anything about the actual entrepreneurial characteristics displayed by men and women or about their desire to be working in this way. Therefore, the findings presented in chapter 6 add something new to the current literature on the differences between men and women's career values.

Significant differences between the age groups tested were found for the GM, CR, PC, and LS anchors only. No differences were found between the age groups for the other career anchors. However, these differences were difficult to interpret as no specific linear trends were found. As this was not a longitudinal study the differences that are reported in chapter 6 relate to differences between age categories or cohorts rather than indicating changes to career anchor scores over time and with age. Therefore this could be said to be more reflective of generational changes than age differences (Zemke et al., 2000). Loughlin and Barling (2001) believed that the concept of work life balance was becoming increasingly important to young people as a result of seeing their families suffer from work related stress. In the data presented in chapter 6, significant differences in the LS anchor were found between the 16-25 and the 26-35 age groups with the 26-35 group expressing a higher need for LS. It could be argued that this finding contradicts Loughlin and Barling's (2001) suggestion. However, as stated above these findings are not related to longitudinal changes, therefore it might be that the LS scores of 16-25 year olds today are still higher than the scores would have been for 16-25 year olds 20 years ago but it is not possible to tell this from the current data set.

Significant differences between the age groups were also found for the GM career anchor sub scale. The 16-25 age group were found to score significantly higher on this subscale than the 36-45 age group and significantly higher than the 46-55 age group. No other significant differences between groups were found. It could be suggested that this finding is contrary to the hypothesis. However, as no linear trends were found it is

not that straightforward. One possible explanation for these findings could be that in early career the path towards general management is the most obvious. The literature presented in chapter 2, section 2.3.1 indicates that vertical career progression is still the main focus of most organisations' career management practices. It might be that as individuals progress they become aware of alternative career paths or become disillusioned with general management roles. However, these suggestions cannot be substantiated with the current data.

Significant differences between age groups were also found in the CR anchor with 26-35 year olds scoring higher than the 36-45 age group and in the PC anchor with 26-35 year olds found to score higher than the 46-55 age group. No linear trends were found with either of these anchors.

No support was found for Schein's prediction that the need to AU would increase with age or that there would be an increasing need for SV among young people in these data. However to make a methodologically accurate assessment of these statements a longitudinal study is necessary.

Interaction effects for age and gender were found for GM and SV indicating that scores on these anchors vary differently for men and women. The interaction effects however are not easily interpretable as no clear linear patterns are shown.

Again acknowledgement must be made of the current sample particularly in light of the fact this sample contains a high proportion of participants under the age of 35. It could be argued that the age differences found may have been different, or possibly clearer if a more representative sample had been used. In addition as stated above, the age differences refer to difference between age groups so do not indicate changes over time. To assess the hypotheses related to age and to changes in career anchor prevalence over time a longitudinal approach is called for. This is discussed in section 10.2.1.

A final finding of note from the data presented in chapter 6 is that examination of high and low scoring anchors and examination of gender differences shows that the results found are largely in line with findings from previous literature. As such it is suggested that they add further support for the use of the COI as a measure of career anchors in the form of construct validity.

Chapters 5 and 6 have focused on the measurement of career anchors using the COI. These studies have provided a good level of support for the measurement of career anchors in this way. These results provide solid foundations for the empirical research reported in chapters 8 and 9 which focus on career anchor congruence. Had the findings from chapters 5 and 6 not been as positive there would have been no basis for examination of congruence. The research presented in chapter 8 examines the possibility that career anchors can be matched to job roles within the host organisation. This is a necessary precursor to the examination of congruence outlined in chapter 9. Specifically within chapter 8 the following hypotheses were considered:

H8.1: A commensurate measure of job anchor characteristics can be developed from the COI.

As a first step an expert panel from the host organisation was consulted. The panel met to discuss a wide range of police staff roles and to decide which anchors could be matched to them. Analysis of the results of this matching process showed that the panel believed there were differences in the anchors supported by different job roles. This led to the second step, developing a commensurate measure of job career anchors. This was necessary to enable the measurement of objective fit for the studies reported in chapter 9. A measure of job anchors was developed by adapting the questions from the COI and using the available literature on career anchors. The full measure can be found in Appendix 9. The internal consistency of each of the scales in the job career anchor measure was calculated using Cronbach's alpha. The coefficients ranged from 0.56-0.81. Using Field's (2006) criteria these results suggest that 6 out of 8 scales have acceptable levels of internal consistency. Using Kline's (1979) optimal range for internal consistency (0.3-0.7) these results suggest that only 2 of the scales are within this range. The discussion above highlights some of the problems with using Cronbach's alpha as a measure of internal consistency. However, it is still widely used, therefore it is concluded from these results that the measure demonstrates acceptable levels of internal consistency and some support is found for H8.1.

As this is the first time an attempt has been made to develop a commensurate measure of job anchors the results presented in chapter 8 should be considered as a first step. If this approach is taken forward in any future research further work is required to fully develop the job career anchor measure. This should take the form of a full empirical analysis as conducted and reported in chapter 5 of this thesis for the COI. This is discussed in more detail in section 10.2.3.

H8.2 Career anchors can be matched to job roles within the host organisation and different jobs will have different career anchor profiles.

To provide some validation for this measure a sample of police staff from nine specific job roles (n=157) were asked to complete the job career anchor measure. The nine jobs were selected because they have a high number of incumbents, are from a variety of organisational grades and represent all of the three distinct groups of police staff that are thought to exist within the host organisation (see chapter 7). An acceptable level of inter-rater correlations (0.60 – 0.80) were found between raters and within each job role. Coolican (1999) indicates that values of 0.7 are acceptable while Francis-Smythe (1996) suggests 0.6. MANOVA was used to test for differences between the 9 job role profiles and significant differences were found for all anchors apart from SE. The lack of differences in the SE job anchor across the 9 job roles was attributed to the fact that all the job roles are taken from one public sector organisation. Therefore it could be assumed that employment security is fairly universal. These results presented in chapter 8 provide support for H8.2 as they suggest that career anchors can be matched to job roles and that the job career anchor measure can be used to distinguish between jobs.

The research presented in chapter 8 provides a platform for future research that considers the ways in which career anchors may be matched to job roles. There is no doubt that before these findings can be generalised research needs to be carried out using larger samples and a wider variety of job roles. This is considered in section 10.2.3. When measuring job career anchors it is important to consider the stability of this measure. Chapter 2 discusses at length the impact of change in the workplace and states the consistency of this change culture. Therefore it is expected that the characteristics of jobs will also change. As a result it may not be possible to expect the measurement of job career anchors to be stable.

Chapter 9 builds on the research presented in chapter 8 by considering the relationship between career anchors, congruence, job satisfaction and organisational commitment. It examines congruence in two ways, objectively using the job career anchor measure created in chapter 8 (n=184) and subjectively by asking participants to rate their level of perceived fit with their job and with the organisation (n=122). The specific hypotheses tested in chapter 9 are discussed in turn.

H9.1a Demographics will explain a significant proportion of the variance in job satisfaction

This hypothesis was tested using multivariate regression analysis. Only the objective fit sample (n=184) could be used to test these hypotheses because demographic data were not collected for the subjective fit sample. The results presented in chapter 9 do not show support for H9.1a. Therefore it can be concluded that with the objective fit sample demographics (operationalised as age and gender) do not explain a significant proportion of the variance in job satisfaction.

The results of previous research concerning explanation of job satisfaction are conflicting. For gender, the finding presented in chapter 9 is consistent with research by Al-Ajmi (2006) where no relationship was found between gender and job satisfaction. However other researchers (e.g. Sousa-Poza & Sousa-Poza, 2003) have found a relationship with some suggesting that women generally exhibit higher job satisfaction than men. Previous research suggests that age will be associated with job satisfaction but there is disagreement as to the exact form of this association. (e.g. Clark, Oswald & Warr, 1996; Kalleberg & Losocco, 1983). As such the research presented in chapter 9 is not consistent with previous research related to age.

H9.1b Demographics will explain a significant proportion of the variance in organisational commitment

This hypothesis was tested using multivariate regression analysis. The results presented in chapter 9 do not show support for H9.1b. Therefore it can be concluded that with the objective fit sample demographics (operationalised as age and gender) do not explain a significant proportion of the variance in organisational commitment.

In previous research a relationship has been found between organisational commitment and age. For example Dick and Metcalfe (2001) found that it increased with age. This relationship has been explained from the perspective of lifespan theories of careers which suggest intention to leave an organisation decreases with age (Cohen, 1993). Mathieu and Zajac (1990) showed that there are gender differences in organisational commitment with women showing higher levels than men. However, Bruning and Snyder (1983) report no gender differences in organisational commitment.

The lack of relationship between age and outcome variables in the explanation of both job satisfaction and organisational commitment is not consistent with previous research and could be related to the fact that age categories were used rather than using age as a continuous variable, this will have restricted the range.

H9.2a Career anchor congruence will explain a significant proportion of the variance in job satisfaction.

The results from this research show that using the objective fit measure career anchor congruence explains 4.1% of the variance in job satisfaction. Using the subjective P-J fit measure 3.2% of the variance in job satisfaction was explained. Perceived P-O fit was not found to be related to job satisfaction. These results provide support for Schein's (1978) notion that congruence is an important component of the career anchor model and for H9.2a.

In both analyses approximately 95% of the variance in job satisfaction is due to other factors. Harris, Moritzen, Robitshek, Imhoff and Lynch (2001) indicate that on average studies of congruence show it predicts approximately 12% of the variance in job satisfaction. Possible reasons for the small proportions of variance predicted are the complexities of job satisfaction. For example Tinsley (2000) discusses the importance of the present state model. This suggests that all workers regardless of their career values, needs or personalities, will experience higher levels of job satisfaction in an environment that has a high level of supplies. It could be suggested that the present state model has an impact here and argued that the host organisation offers a high level of supplies, for example job security, annual pay rise, family environment, and therefore it is these factors that will have the biggest impact on job satisfaction. Similarly as discussed in chapter 2, section 2.2.5.1 there are also dispositional factors associated with job satisfaction. These are discussed in greater detail under H9.3.

H9.2b Career anchor congruence will explain a significant proportion of the variance in organisational commitment.

This hypothesis was not supported using the objective measure of fit or the subjective measure of P-O fit. However, the results show that 3.7% of the variance in organisational commitment was explained by subjective P-J fit. Therefore only partial support for H9.2b was found.

Schein (1978) and Feldman and Bolino (1996) believed that career anchor congruence would be related to both job satisfaction and organisational commitment. The findings from this research provide some support for this notion. However the explanatory power of career anchor congruence could be described as low. A similar criticism is

made of the congruence research that has been conducted using Holland's model of vocational personality (e.g. Spokane, 1985). Arnold (2004) discusses several possible reasons for the low explanatory power found in congruence research. Two of these points may be relevant here. Firstly, Arnold (2004) discusses the measurement issues associated with measuring the environment in fit research. Criticisms could be made of both the objective and subjective approaches to the measurement of job and organisation in the research presented in chapter 9. Issues concerning the commensurate measurement of jobs have been discussed above. The subjective fit measurements used in this research are based on single items. Whilst this approach is not uncommon it is not the most sophisticated approach to environment measurement.

Secondly, Arnold (2004) discusses the fact that congruence studies may have suffered from sub optimal measurement and statistical analysis of congruence. The objective fit measurement reported in chapter 9 uses a profile similarity index and several researchers have discussed difficulties with these (see chapter 4 for full discussion). Therefore there may be issues with the statistical analysis of congruence that has been applied here. However, Tinsley (2000) calls for researchers to consider the role of moderator variables in fit research as it may be that examining direct effects only is not enough. This is discussed under H9.4.

H9.3a Career anchors will explain a significant proportion of the variance in job satisfaction.

The results showed that for the objective fit sample the career anchors GM, SE, SV and PC explained 10% of the variance in job satisfaction. However for the subjective fit sample career anchors alone were not found to be a significant predictor of job satisfaction. Therefore only partial support was found for H9.3a. Closer examination of the beta values in the analysis using the objective fit sample shows that there was a positive relationship between the career anchors SV and SE with job satisfaction and a negative relationship between the GM and PC career anchors with job satisfaction.

Previous research has shown that there is evidence for dispositional sources of job satisfaction. For example Judge, Heller and Mount (2002) found support for a relationship between scores on the neuroticism and agreeableness scales on the big five and job satisfaction. In relation to career anchors, Igbaria and Baroudi (1993) found a positive relationship between job and career satisfaction and the career anchor TF. Explanation of the results reported in chapter 9 that relate to H9.3a is complex in light of the fact that significant results were only found with one of the samples. The relationship under consideration is the direct effect of scores on the career anchor subscales on job satisfaction. The only difference between the two samples in this

study is the way fit is measured and the job roles they carry out. As such, the sample (which relates to objective or subjective fit) should not have an impact upon the results but in this research it seems to. Those in the objective fit sample come from a narrow range of police staff roles (one of the 9 roles used in the matching processes described in chapter 8). Whereas those in the subjective fit sample come from a much broader range of police staff roles. Therefore, when explaining the difference in the results found for each sample it seems necessary to take this into consideration. However, in doing so it is possible that fit becomes a confounding variable. For example, a possible explanation for the significant results found using the objective fit sample could be related to the fact that we know, from the analysis presented in chapter 8, that the 9 job roles these individuals carry out can be matched to career anchors. The same cannot be said for the job roles carried out by those in the subjective fit sample. Therefore, it could be said that the negative relationship between GM, for example, and job satisfaction could be because none of the 9 job roles have management responsibilities. However this implies a consideration of fit (i.e. the roles provide low support for GM therefore if an individual has a high need for GM shown by high scores on this scale of the COI job satisfaction will be low) and this hypothesis and associated analysis should relate only to the direct effect of career anchors. Alternatively, a consideration of organisational culture could be made as the research was conducted within the host organisation. For example the positive relationship between the SV anchor and job satisfaction could be due to the culture of the host organisation. It is a police organisation and as such it could be suggested that all the roles within it are related to serving the community. However, this consideration of culture does not explain why a significant result was found for one sample but not the other as both samples were taken from the host organisation.

In conclusion it is suggested that the significant finding from the objective fit sample that was not replicated in the subjective fit sample is due to some aspect within the sample. This could be related to their job roles. Without further data that explain the differences between samples (which could include any number of variables for example job title, job level, length of service) it is not possible to be certain that career anchors alone explain variance in job satisfaction. Schein (1978) believed that the mechanism through which career anchors impacted upon outcomes, such as job satisfaction, was congruence not the career anchors alone.

H9.3b Career anchors will explain a significant proportion of the variance in organisational commitment.

The results show that no support was found for this hypothesis in either sample. This suggests that career anchors alone are not responsible for levels of organisational commitment. This is consistent with previous research for example Finegan (2000) who found that values were only related to organisational commitment when fit was also considered.

H9.4a Congruence will moderate the relationship between career anchors and job satisfaction.

The method recommended by Baron and Kenny (1986) for examining the role of moderator variables was employed in the analysis reported in chapter 9. Only the objective fit sample could be used to test this hypothesis as no relationships were found between career anchors and job satisfaction using the subjective fit sample. The results show that the interaction terms associated with fit for CR and SV are acting as moderating variables and this moderation accounts for an additional 5% of the variance over and above the contribution made by career anchors and career anchor congruence. In total the model accounts for 24% of the variance in job satisfaction.

The findings suggest that person-job fit on the CR and SV career anchors are particularly important. Possible reasons for this relate to the culture of the host organisation and to the nature of the 9 job roles conducted by individuals in the objective fit sample. For example the results of the matching process reported in chapter 8 show that the CR anchor is not well provided for by the host organisation. Therefore if an individual exhibits high scores on this anchor it is likely that this will not fit well with their job role. The moderation effect exhibited by fit on this anchor suggests that this is likely to reduce the level of job satisfaction associated with career anchors alone.

The fact that moderation effects were found suggests that any impact of career anchor scores on job satisfaction will be affected by fit. This suggests that, for example, the strength of the relationship found between the SV anchor and job satisfaction will be affected by the individuals fit on the CR and SV anchors. However, in relation to the discussion of H9.3a more research is needed to examine the true extent of the relationship between career anchors and job satisfaction before real consideration of fit as a moderator can be made.

H9.4b Congruence will moderate the relationship between career anchors and organisational commitment.

It was not possible to examine this hypothesis as no relationships were found between career anchors and organisational commitment for either sample.

H9.5a Career salience will moderate the relationship between congruence and job satisfaction.

This hypothesis could only be tested for objective fit and perceived P-J fit as no relationship was found between perceived P-O fit and job satisfaction. The results of hierarchical multiple regression analysis reported in chapter 9 did not find support for the role of career salience as a moderator for either approach to fit. Therefore H9.5a was not supported. However, what the regression analysis did show was that career salience alone explained a proportion of the variance in job satisfaction (2% using objective fit and 6% using perceived P-J fit).

This finding is not consistent with previous literature as Greenhaus (1971) believed that the relationship between congruence and outcomes would be higher for those with high fit. Arnold (2004) also suggested that the importance of work would impact upon the effects of congruence. The reason for this put forward by Greenhaus (1973) was that individuals with high career salience were likely to invest more time in making career decisions. The fact that career salience was found, in this research, to explain a proportion of the variance in job satisfaction could be attributed to the same reason. For example, it could be suggested that individuals with high career salience are likely to experience higher job satisfaction because they have made sure they are in a job they will enjoy.

H9.5b Career salience will moderate the relationship between congruence and organisational commitment.

Only the perceived P-J fit measure could be used to assess this hypothesis as no relationship was found between fit and organisational commitment was found when using objective fit or perceived P-O fit. The results of the hierarchical regression analysis did not show any support for the role of career salience as a moderator of the relationship between fit and organisational commitment. Therefore H9.5b was not supported. However, the regression analysis did show that career salience has a direct effect on organisational commitment. Within the subjective fit sample career salience was found to explain 25% of the variance.

This finding was not expected. Again part of the suggestion made by Greenhaus (1973) can be used to offer an explanation for this finding. The relatively high proportion of organisational commitment explained by career salience in this sample could be due to individuals high on career salience investing more time in career decisions. As such it maybe that they also invest time in selecting the organisation where they wish to base their career which could in turn lead to high organisational commitment.

To summarise the career anchor congruence studies reported in chapter 9 make some important contributions to our knowledge of the career anchor model. These are discussed in section 10.3. However, as with all congruence research, it could also be argued that this research is limited by from range restriction. This is because individuals who found themselves in a highly incongruent environment are likely to have left the organisation (Schein, 1993). However, examination of both the perceived and objective fit scores gathered from the sample used show a full range of scores from highly congruent to highly incongruent suggesting that this may not have had a large impact on the current samples.

In this research objective fit was measured using a form of profile similarity index (Cattell's r_p). As mentioned above several authors (Edwards & Parry, 1993; Edwards & Van Harrison 1993; Hesketh 1993) have discussed methodological issues with this approach to congruence research and this is summarised in chapter 4. In relation to the findings from this study the most significant disadvantage of using PSIs could be said to be the fact that they do not take into account the direction of differences or the actual components of a difference. For example, an individual whose career anchor profile differs from their job anchor by just a few points on each anchor could have the same fit scores as an individual whose career anchor profile differs greatly from their job anchor profile on just one anchor. These differences could be very salient when it comes to the impact of congruence and could have affected the results reported here. Future studies may need to consider taking an alternative methodological approach. For example Edwards (1994) recommends the use of polynomial regression in congruence research.

Finally, this research was conducted with one organisation. This places limits on the generalisability of these findings. This relates to the results presented in both chapter 8 and chapter 9. This is considered in more detail in section 10.2.

The research presented in this thesis has indicated a number of areas that require further clarification. Suggestions as to how this research could be taken forward are considered within this section.

10.2.1 Longitudinal study

The examination of stability of career anchors considered in chapter 5 and the exploration of differences in career anchor scores between age groups outlined in chapter 6 both indicate a need to consider a longitudinal approach to career anchors research. Schein's (1978) original research leading to the development of the model followed a sample of 44 alumni over a ten year period. During this time Schein conducted a number of interviews with participants to explore their career choices. This approach generated a rich data source from which to examine the development of patterns in career decisions. This resulted in the career anchor model. Savickas (2002) states that longitudinal research designs are rare in the field of careers and proposes that this type of research should be encouraged in the future. This is an example of where a qualitative research design could add significant depth to our knowledge of career anchors and career values more generally. For example, in chapter 2 the role of organisational socialisation in shaping our values was discussed. A longitudinal study on career anchors could explain more about how this process impacts upon an individuals anchors.

In summary a longitudinal approach to career anchors research in the future would greatly contribute to our knowledge of the model and to our knowledge of value change more generally. The dynamic nature of work that exists means that knowledge of how external factors impact upon individuals needs and values could provide valuable information to organisations to improve both individual satisfaction and organisational performance.

10.2.2 Nature of career anchors

The empirical analysis of the COI as a measure of career anchors presented in chapter 5 provides some evidence for an 8 factor structure underlying the constructs under consideration. The results presented in chapter 5 are not consistent with previous findings as an 8 factor structure which reflects that suggested by Schein (1993) was found. No evidence was found to suggest the security anchor should be split contrary to previous research. This, and the variety of research approaches undertaken to examine the factor structure to date, suggests that there is still a need for more

research to be conducted to enable a clear conclusion to be drawn. Specifically, this research should be conducted with larger and more varied samples than before. Consistency of measurement must be shown by ensuring the same version of the COI is used across samples. This approach will protect future research from the criticisms that have been made here concerning the variety of measures used and the sampling limitations.

Alongside this, consideration of the nature of career anchors contained within the model more generally should also be considered. Chapter 2 of this thesis presented an overview of the changes that have been seen in the nature of careers and suggested that the one constant in the future of careers is the continued existence of change. As such, it is important to ensure that models and theories of careers can cope with this. It has been argued within this thesis that the career anchor model is particularly appropriate to the new career realities because of their breadth. To ensure this remains the case research is needed to explore the existence of additional factors that may contribute to career decisions. This could uncover new career anchors. Suutari and Taka (2004) have already suggested a potential new career anchor that they have labelled "Internationalism" (p.836). They define this as "being primarily excited by working in an international task environment; prefers to develop his/her professional competences through getting to know unfamiliar countries and different countries" (p.836). Their research was based on a sample of global managers so this anchor may be sample specific but is important not to overlook the possible existence of new career anchors when conducting future research.

When considering the potential for additional career anchors in the future, it will also be necessary to examine the relevance of the existing anchors. Specifically how they are operationalised through the COI. The data presented in chapter 5 showed that the TF scale exhibited low levels of internal consistency and test retest reliability. This may indicate that this anchor needs reconceptualising. Similarly in chapter 6 the GM anchor showed low prevalence in the current sample (n=658). However, Schein (1996) predicted that there would be an increase in demand for individuals with this anchor at lower levels of organisations. Whilst it is recognised that supply and demand are not always matched, if Schein believes that characteristics associated with the GM anchor will be needed at lower levels of an organisation then there may be a need to reconsider the way this anchor is operationalised in the COI. Currently the items relating to this anchor focus strongly on senior management and organisational leadership.

To summarise, the data presented in chapter 5 provides support for the COI as a measure of career anchors. However, due to the fragmented approach to the empirical analysis of the factor structure that exists, in order to draw strong conclusions more research on large and varied samples is required. At the same time continued reflection concerning the nature of the career anchors both in the model and measured by the COI is needed to ensure the model remains relevant to the changing world of work.

10.2.3 Measuring job career anchors

The research presented in chapter 8 provides a platform for future research that considers matching career anchors to job roles. This research could be considered as a first step in assessing the viability of this matching process. The results of which are promising. If this approach is to be taken forward in future studies a more sophisticated approach to the development of a job career anchor measure is required. This may involve item analysis to ensure the items are accurately reflecting the constructs in question, factor analysis to see if the 8 career anchor scales are actually being measured and analysis of the reliability and validity of the measure. More research would be required to ensure that the matching process could be generalised to other organisations and other job roles. This is considered in the following section.

10.2.4 Generalisability

The data presented in chapters 8 and 9 concerning matching career anchors to jobs and exploring the role of career anchor congruence were conducted on data gathered from just one organisation. This places limits on the generalisability of the findings reported. However, the data presented does provide a basis for future work. If these findings could be replicated in other organisations and in broader samples then stronger support for the hypothesised relationships could be provided.

The job career anchor measure developed in chapter 8 has been shown here to successfully distinguish between nine police staff roles within one organisation. To determine if this finding can be replicated with other jobs and with other organisations more research is needed. It may also be interesting to examine the role of organisational culture to see if findings are transferable across organisations for jobs with the same title (the approach used by Holland) or whether there is an organisational component that contributes to the career anchors that a job provides for.

Research that considers the role of congruence conducted with larger samples may provide some clarification as to if and why only certain career anchors predict outcome

variables and why only fit with certain anchors acts as a moderator. Similarly the relationship between congruence and other outcome variables could also be examined. Feldman and Bolino (1996) including increased work effectiveness, job stability, work role adjustment, psychological well-being and reduced role conflict as outcome variables that might be affected by congruence or incongruence related to the career anchor model.

10.2.5 Application of career anchors

This research provides support firstly for a psychometrically sound measure of career anchors. Secondly, evidence has been found that suggests career anchors can be matched to and can distinguish between job roles. Finally, the link between career anchor congruence and the outcome variables of job satisfaction and organisational commitment has been examined. These findings provide a platform for the introduction of career anchors as a framework for organisational career management. Similarly the findings reported in chapter 6 concerning the demographic differences and prevalence of certain career anchors could be utilised by organisations when deciding on CPM processes. More research is needed to examine how effective the career anchor model is as a framework for this type of activity. Evans (1996) states that the model is normally used in individual career counselling rather than as part of organisations' career systems. This places a limitation on the applications of the model and one that this research suggests could be lifted by this type of research.

10.3 Contribution to the literature

The research presented in this thesis builds on the current knowledge of the career anchor model by examining its measurement using the COI and extending the model's application through a consideration of congruence. The research has been well received at a number of academic conferences in the field of occupational psychology. A list of published conference papers relating to this research can be found in Appendix 10. This section considers the contribution of each section of the research to the current body of academic literature.

10.3.1 Empirical Analysis of the COI

The research presented in chapter 5 concerning the psychometric properties of the COI contributes to the literature on career anchors in three main ways.

The first main contribution to the literature is that the studies presented here are the first to provide evidence for an eight factor structure measured by an adapted version

of Igbaria and Baroudi's (1993) COI. This finding is the first to confirm the factor structure proposed by Schein and as such provides a promising contribution to career anchor research. An additional contribution of the research presented in chapter 5 is to provide evidence in support of the COI's use as a measure of career anchors within the UK. Previous research has been conducted that aimed to examine the properties of the COI. However, the research to date has used small, restricted samples often from just one organisation (e.g. Yarnall, 1998) or one professional group (e.g. Jiang & Klein, 2000). This has the potential for increased error due to the sample being too small for effective factor analysis or for restriction of range due to homogenous sampling. The data presented here are from a large sample of individuals from a wide variety of organisations and professions. Similarly, none of the previous research uses a sample from the UK yet the model is used widely here.

Chapter 5 also presents evidence for the reliability and validity of this version of the COI as a psychometric instrument. To date research supporting these psychometric constructs has been lacking. Some researchers have considered the internal consistency of the measure but only one (DeLong, 1982) has made any consideration of test-retest reliability. Therefore, the second major contribution of this research concerns the reliability over time of the COI. In addition, the examination of stability of career anchors over time, whilst suffering from some methodological flaws as discussed above still provides a platform for examining stability in future studies.

Finally, the third contribution to the literature made by the research presented in chapter 5 concerns the validity of the COI. To date only one published study mentions the validity of the COI (Brindle & Whapham, 2003b) and this focuses on construct validity. Without knowledge of a measure's validity it is not possible to be certain about the constructs it is measuring. Therefore, the findings from the research in chapter 5 address an important gap in the current career anchors literature by suggesting that the COI as a measure of career anchors does exhibit an acceptable level of face validity and construct validity when compared to the WVQ. The relationship found between career anchors and job satisfaction reported in chapter 9 provides some evidence for the criterion validity of the COI as a measure.

10.3.2 Prevalence and demographic differences

A significant amount of literature already exists concerning career values and much of this considers the age and gender differences that exist in those values. However, the research presented in chapter 6 contributes to this literature by using career anchors as a framework for examining demographic differences in career values. In addition

the research provides an indication that career values are changing, indicating a move away from values associated with the traditional view of careers related to progression into general management roles, and a move towards values associated with the current perceptions of careers through the high prevalence of the lifestyle anchor found with this sample.

10.3.3 Matching career anchors to job roles

Schein (1978) believed that congruence was an important component of the career anchor model. However, his statements about career anchors not necessarily being related to jobs made the examination of career anchor congruence methodologically difficult. Previous work has made assumptions about the career anchors that would be provided for by particular roles (e.g. Bester, Phil & Mouton, 2006). This research is the first to demonstrate that career anchors can be matched to job roles through the development of a job career anchor measure. This research also shows that the job career anchor measure can actually distinguish between job roles, therefore successfully addressing a gap in the current literature on career anchors. The fact that the job roles were taken from the same organisation makes this finding even more salient. It suggests that the differences found are really due to differences in career anchors provided for by the job role as other factors such as organisational culture remained relatively constant.

10.3.4 Congruence

Previous research has attempted to examine the role of congruence and the career anchor model and its relationship to work related outcomes (e.g. Tan & Quek, 2001). The previous research has been based on assumptions made by the researchers as to which anchors fit which jobs. The main contribution made by the research presented in chapters 8 and 9 is that the data for measuring congruence were gathered from the job incumbents themselves. These data provide evidence that indicates that career anchors themselves may have an impact on outcomes, that career anchor congruence predicts outcomes and that this congruence may moderate the relationship between anchors and outcomes. The research presented in chapter 9 is by far the most thorough investigation into the relationship proposed by Schein (1978) between career anchor congruence and outcome variables conducted to date. Without evidence to suggest that career anchor congruence is important the utility of the model could be questioned.

Finally the research from chapters 8 and 9 were conducted using data gathered from a police staff sample. As discussed in chapter 7 only one academic paper exists relating

to this group of staff. Therefore a notable contribution of this research is related to its context. It provides some information about how suitable career anchors are to this group of staff and gives an indication as to how applicable this model would be as a framework for their career development.

10.3.4 Summary of contributions to the literature

This research has contributed to the literature in 3 main ways:

1. It provides support for the psychometric properties of the COI as a measure of the career anchor model as proposed by Schein (1993).
2. It demonstrates that career anchors can be matched to job roles within a police organisation and that a measure of job anchors can be used to distinguish between job roles.
3. It has empirically examined the role of congruence and the career anchor model in the prediction of job satisfaction and organisational commitment.

10.4 Implications for practice

The research presented in this thesis provides empirical support for the use of the COI as a measure of career anchors. This research can provide reassurance to practitioners who are using the measure with UK samples. In addition it suggests that career anchors can be matched to police staff job roles and that anchors can be used to distinguish between jobs. Once this research has been extended to consider other organisations this method of matching career anchors to jobs could be generalised. This is important in practice because this matching process using the career anchor model could be used as a framework for creating career paths that allow for consideration of career values in career planning. If this method of matching career anchors to job roles could be replicated and extended there are additional ways in which the model could be applied. For example, Ramakrishna and Potosky (2003) suggest that organisations could use career anchors to guide selection, development and reward policies by matching career opportunities to career anchors.

The data presented in chapter 6 has particular implications for organisational career management. The data indicates that there are significant gender and age or generational differences in the career anchors that individuals hold. With an increasingly diverse and ageing workforce organisations could use this information to ensure that their reward systems and development practices are providing for this increased diversity. These data also indicate that individuals today have a strong need

for lifestyle factors to be considered in their career decisions. It also suggests that, for the majority, the desire to follow a general management career path is not that important. When considering organisational career management processes in chapter 2 it was acknowledged that most organisations still view careers in the traditional sense. Therefore their career management strategies still focus on upwards progression through an organisation. Consideration of the career management interventions on offer for police staff within the host organisation (reported in chapter 7) showed that these all focused on hierarchical advancement. The data showing the prevalence of each of the career anchors within the current sample indicates that this type of intervention is likely to be of little interest to the majority of staff within organisations. This highlights an urgent need for organisations to revise their approach to career development to allow for a broader range of career needs to be met.

10.5 Personal Reflection

This final section provides some reflections on the research process. At the start of the research a brief was provided by the host organisation as they were match-funding the research. This was very general and discussions with key stakeholders revealed that I had a great deal of autonomy concerning the way this research should proceed.

The initial review of the literature on careers revealed the significant changes to the concept that have been discussed. This led me to question the viability of some of the more common career models that are used in career planning. I then began to take a more critical approach to searching for a model that was broad enough to encompass a variety of individual factors and one that had the potential to be flexible enough to cope with continued change.

The nature of the group of staff I was focusing on within the host organisation was such that making decisions about how the research should proceed were extremely difficult. As discussed in chapter 7 police staff are increasing in numbers but no concrete consideration of their career development had been made. The initial research proposals were somewhat different to the actual research objectives that were finally addressed. This was due largely to difficulties experienced due to organisational changes and non participation discussed in chapter 4. The revision of these research proposals was a challenging stage of the research process, however, on reflection I believe that the aims that were finally addressed have allowed this thesis to make a more significant contribution to the research literature.

The process of conducting this research has, in itself, been a career development intervention. It has enabled me to learn many of lessons about identifying gaps in the existing literature, formulating research proposals, negotiating access to carry out proposed research, building and maintaining relationships with participants and the dissemination of research through writing and through conference presentations. On a more personal level my skills as a researcher and more general skills such as time management, organisation and persistence have been developed greatly. It has raised my level of awareness of my own career values and I now recognise my strong need for autonomy and needs for sense of service and functional expertise. These are all lessons that I believe will assist me in managing my own career in the future.

Appendices

Appendix 1 – Career History

Box 3.1:

Taken from Schein (1978)

Appendix 2 – Career anchor interview process

The purpose of the interview is to help you and your partner to understand the factors that guide and constrain careers by identifying patterns or themes in events and the reasons behind them. Work through the questions in a relaxed manner and feel free to deviate to other related issues that may come up. Your job is to help your partner to talk out his or her career history so that you can examine its patterns and themes together.

1: *Education*. Lets start with your education. What did you concentrate on in school? (Explore especially university and postgraduate education).

Why did you choose those areas?

How do you feel now about having chosen those areas?

2: *First Job*: What was your first real job after your education? (If you *did not* start out working, what was your first major life event after your education?)

What were you looking for in your first job or life event? Why did you make that choice?

3: *Goals*; What were your ambitions or long-range goals when you started your career?

How did the first job work out in terms of your goals?

4: *Next Job or Major Life Event* What was your first major change in your job or employing organisation?

How did this change come about? Who initiated the change? What were the reasons for the change?

How did you feel about the change? How did it relate to your goals?

Continue to analyse job/career/life changes until the present, using the preceding format of questions.

5: As you look back over your career and life so far, do you see any major transition points, times when the change seemed more than routine? Please describe each of these times.

What was the transition? How did it come about? Who initiated it?

How did you feel about the change? How did it relate to your goals?

Using the same format, describe other major transitions.

6: As you look back over your career and life so far, can you describe some times that you especially enjoyed?

What was it about those times that made them enjoyable?

7; Were there times that you especially did not enjoy?

What was it about those times that made them not enjoyable?

8: Have you ever refused a job or promotion? If yes, can you describe it?

Why did you refuse it?

As you look ahead in your career, are there things you would like especially to avoid? Are there things you are afraid of?

What about these things makes you want to avoid them or makes you afraid?

9: Have your ambitions or long range goals changed since you started your career? When? Why?

How would you now describe your long-range goals?

10: As you look ahead in your career, what are the things you are especially looking forward to?

Why are you looking forward to these things?

What do you think your next job will be?

After that what do you think your next job will be?

(Continue asking for next jobs until you elicit the answer to what the person would “ultimately” like to be.)

11: What do you think will actually happen in the next ten years of your career?

Why do you think this?

12: How would you describe your occupation to others?

What are you really good at?

What do you most want out of your career?

What values do you especially try to uphold in your career?

Do you have any other comments about yourself that you would like to make at this point?

13: As you think over the answers you have given, what patterns or themes do you see?

What inconsistencies, contradictions or conflicts do you see in what you have identified?

What hypothetical situations might resolve those conflicts or inconsistencies?

At this point you should go on to look at career anchor categories.

Technical Competence:

1. I would rather leave my organisation than be promoted out of my area of expertise
2. I will accept a management position only if it is in my area of expertise
3. Remaining in my area of expertise rather than being promoted into general management is important to me
4. Remaining in my specialised area as opposed to being promoted out of my area of expertise is important to me
5. Becoming highly specialised and highly competent in some specific functional or technical area is important to me
6. My main concern in life is to be competent in my area of expertise
7. I see myself more as a generalist as opposed to being committed to one specific area of expertise

Autonomy

1. The chance to pursue my own lifestyle and not be constrained by the rules of an organisation is important to me
2. A career that is free from organisation restriction is important to me
3. I do not want to be constrained by either an organisation or the business world
4. During my career I have been mainly concerned with my own sense of freedom and autonomy
5. A career that permits a maximum freedom and autonomy to choose my own work hours and so forth is important to me
6. I find most organisations to be restrictive and intrusive
7. An endless variety of challenge in my career is important to me

Service

1. I have sought a career that allows me to meet my basic needs through helping others.
2. I have always sought a career in which I could be of service to others
3. Being able to use my skills and talents in the service of an important cause is important to me
4. Seeing others change because of my efforts is important to me
5. The use of my interpersonal and helping skills in the service of others is important to me
6. I like to see others change because of my efforts

Identity

1. I want others to identify me by my organisation and my job title
2. To be recognized by my title and status is important to me
3. I like to be identified with a particular organisation and the prestige that accompanies the organisation
4. It is important for me to be identified by my occupation
5. Being identified with a powerful or prestigious employer is important to me

Variety

1. An endless variety of challenges is what I really want from my career
2. A career that provides a maximum variety of types of assignments and work projects is important to me

3. I have been motivated throughout my career by using my talents in a variety of different work areas
4. The excitement of participating in many areas of work has been the underlying motivation behind my career
5. A career that gives me a great deal of flexibility is important to me

Managerial Competence

1. To be in a position in general management is important to me
2. To rise to a position in general management is important to me
3. The process of supervising, influencing and leading people at all levels is important to me
4. I would like to reach a level in an organisation where my decisions really make a difference
5. I want to achieve a position that give me the opportunity to combine analytical competence with supervision of people.

Security

1. An organisation that will provide security through guaranteed work, benefits a good retirement and so forth is important to me
2. An organisation that will give me long run stability it important to me
3. I am willing to sacrifice some of my autonomy to stabilize my total life situation

Security 2

1. Remaining in my present geographical location rather than moving because of promotion is important to me
2. It is important to me to remain in my present geographical location rather than move because of a promotion or new job assignment

Creativity

1. I have been motivated throughout my career by the number of products I have been directly involved in creating
2. To be able to create or build something that is entirely my own product or idea is important to me
3. The use of my skills in building a new business enterprise is important to me
4. I would like to accumulate a personal fortune to prove to myself and others that I am competent.

Appendix 4 – Schein's (1993) version of the COI

1. I want to be so good at what I do that others will always seek my expert advice.
2. I am most fulfilled in my work when I have been able to integrate the efforts of others toward a common task.
3. I dream of having a career that will allow me the freedom to do a job in my own way and on my own schedule.
4. I am always on the lookout for ideas that would permit me to start my own enterprise.
5. Security and stability are more important to me than freedom and autonomy.
6. I would rather leave my organisation than be put into a job that would compromise my ability to pursue personal and family concerns.
7. I will feel successful in my career only if I have a feeling of having made a real contribution to society.
8. I dream of a career in which I will always have the challenge of solving ever more difficult problems.
9. I will feel successful in my career only if I can develop my skills to an increasing level of competence.
10. I dream of being in charge of a whole organisation.
11. I am most fulfilled in my work when I am completely free to define my own tasks, schedules and procedures.
12. I would not stay in an organisation that would give me assignments that would jeopardise my job security.
13. Building a business of my own is more important to me than being a high level manager in someone else's organisation.
14. I have felt most fulfilled in my career when I have been able to use my talents in the service of others.
15. I will feel successful in my career only if I have met and overcome increasingly difficult challenges.
16. I dream of a career that will permit me to integrate my personal, family and work needs.
17. Becoming a senior functional or technical manager in my area of expertise is more attractive to me than becoming a general manager.
18. I will feel successful in my career only if I achieve complete autonomy and freedom to define my work.
19. I usually seek jobs in organisations that will give me a sense of stability and security.

20. I feel most fulfilled when I have been able to build something that is primarily the result of my own skill and effort.
21. I will feel successful only if I become a high level general manager in some organisation.
22. Using my talents to make the world a better place to live is what drives my career decisions.
23. I have been most fulfilled in my career when I have been able to solve seemingly unsolvable problems or won out over seemingly impossible odds.
24. I feel successful in life only if I have been able to balance my personal, family and career requirements.
25. I dream of a career that will allow me to feel a sense of stability and security.
26. I would rather leave my organisation than to accept a rotational assignment that would take me out of my area of expertise.
27. Balancing the demands of my personal and professional life is more important to me than a high level managerial position.
28. I dream of being in a career that makes a real contribution to humanity and society.
29. I will feel successful in my career only if I have created an enterprise of my own based on my own ideas and skills.
30. Becoming a general manager is more attractive to me than becoming a senior functional manger in my area of expertise.
31. The chance to do a job in my own way, free of rules and constraints, is very important to me.
32. I prefer work opportunities that strongly challenge my problem solving and competitive skills.
33. I dream of starting up and building my own business.
34. I would rather leave my organisation than accept a position that would undermine my ability to be of service to others.
35. I am most fulfilled in my work when I have been able to use my specialist skills and talents.
36. I would rather leave my organisation than accept a job that would take me away from the path to general management.
37. I am most fulfilled in my work life when I feel that I have complete financial and employment security.
38. I would rather leave my organisation than accept a job that would reduce my autonomy and freedom.
39. I have always sought our work opportunities that minimise interference with my personal and family needs.

40. Working on problems that are difficult to solve is more important to me than achieving a high level management position.

Appendix 5 – Version of COI used for this research, based on Igbaria and Baroudi (1993)

- 1: To build my career around some specific function or technical area is
- 2: The process of supervising, influencing, leading and controlling people at all levels is
- 3: The chance to do my own thing and not be constrained by the rules of the organisation is
- 4: An employer who will provide security through guaranteed work benefits, a good retirement program etc is
- 5: To be able to create or build something that is entirely my own product or idea is
- 6: The use of my interpersonal and helping skills in the service of others is
- 7: Working on problems that are almost insolvable is
- 8: Developing a life cycle that balances my career and family needs is
- 9: Remaining in my specialised area as opposed to being promoted out of my area of expertise is
- 10: To be in charge of a whole organisation is
- 11: A career that is free from organisational restriction is
- 12: An organisation that will give me long term stability is
- 13: Building a new business enterprise is
- 14: Using my skills to make the world a better place to live and work in is
- 15: Competing with and winning over others is
- 16: Developing a career that permits me to continue to pursue my own lifestyle is
- 17: Remaining in my area of expertise throughout my career is
- 18: To rise to a high position in general management is
- 19: A career that permits a maximum amount of freedom and autonomy to choose my own work hours etc is
- 20: Remaining in one geographical area rather than moving because of promotion is
- 21: I am always on the look out for ideas that would permit me to start and build my own enterprise.
- 22: Being able to use my skills and talents in the service of an important cause is
- 23: The real challenge in my career has been confronting and solving tough problems
- 24: I have always tried to give equal weight to my family and to my career

- (25: I will accept a management position only if it is in my area of expertise)
- 26: I would like to reach a level of responsibility where I would supervise others in various business functions and my role would be primarily to integrate their efforts
- 27: During my career I have been mainly concerned with my own sense of freedom and autonomy
- 28: It is more important for me to remain in my present location than to receive a promotion in another location
- 29: Entrepreneurial activities are a central part of my career
- 30: I have always sought a career where I can be of service to others
- 31: Competition and winning are the most important and exciting parts of my career
- 32: A career is worthwhile only if it enables me to live my life my own way
- 33: I would rather leave my company than be promoted out of my area of expertise
- 34: I will feel successful in my career only if I become a high level general manager in some organisation
- 35: I do not want to be constrained by either an organisation or the business world
- 36: I prefer to work for an organisation that provides security of employment
- 37: I have always wanted to start and build up a business of my own
- 38: I want a career in which I can be committed and devoted to an important cause
- 39: I feel successful only if I am constantly challenged by a tough problem or a competitive situation
- 40: Choosing and maintaining a certain lifestyle is more important than career success

() = removed after factor analysis

Appendix 6 – List of organisations that participated in empirical analysis

Organisation Location	Organisation Types	Contact Point
Worcester	Design Company	Architect
Birmingham	Transport	HR
Harrogate	Police	T and D
Oxford	Education	Secretary
Oxford	Publishing	T & D
Slough	IT services	HR
Southampton	Aerospace	HR
Gloucester	Local Government	Trading Standards
Gwent	Police	HR
Oxford	Retail	Manager
Cheltenham	Management Consultancy	Consultant
Wimbledon	Financial Services	Director
London	Central Government	Psychologist
Oxford	Education	T & D
Worcester	Recruitment	Office Manager
Manchester	Recruitment	Office Manager
London	Transport	T & D
Oxford	Consultancy	MD
Norwich	Chemical Industry	T & D
Worcester	Education	HR
Swindon	Police	HR
York	Local Government	HR

Appendix 7 Career Anchor Profile

Career Profile

The information below contains details about your career preferences based on the Career Anchor Model. Career Anchors tell us about our motivations, needs and values, these are all factors that guide our decision-making processes.

The table below shows the importance of each anchor to you in rank order, the maximum score for any anchor is 30 and the minimum is 6. The first anchor is the most important and when making career decisions is the one that you will least willingly give up. The higher your score on each anchor the bigger the influence it is likely to have on your career decisions.

Career anchors are developed through experience and as such they are subject to change. The table below shows your profile as it is now, if you are in the early stages of your career or experiencing a major life change then the profile is likely to alter in the future.

Rank	Anchor	Score
1	Security & Stability	27
2	Lifestyle	23
3	Functional Expertise	22
4	Service	21
5.5	Autonomy	15
5.5	Challenge	15
7	Creativity	11
8	General Management	8

Security & Stability

There are 2 aspects to this anchor, one relates to employment security and the other to geographical security. Either one, or both of these aspects is likely to be most applicable to you. Security or stability may involve the need to do whatever the employer wants from you for some promise of job tenure or job location. You are less concerned with the content of your work and the rank you achieve in the organisation.

You will be happiest when the future is predictable and in an environment where there are limited changes happening. If security is in place you will offer your employer loyalty and flexibility. You will value long term benefits from your employer such as pension schemes and will like to be able to see a future for yourself within the organisation.

Lifestyle

What is important in the lifestyle anchor is a situation that permits you to balance and integrate your personal needs, your family needs and the requirements of your career. You want to make all of the major sectors of your life work together and therefore need a career situation that provides enough flexibility to achieve such integration.

If your organisation understands your need for work life balance and is able to allow for that you will be an extremely loyal and committed employee. You will however define success in broader terms than simply being something that is work based.

Functional Expertise

What is most important to you is the opportunity to apply your skills in your area of expertise and to continue to develop those skills to an even higher level. You derive your sense of identity from the exercise of skills and knowledge. You are most happy when your work permits you to be challenged in those areas. You are willing to supervise others in your functional area, but you are not interested in management for its own sake and would avoid general management.

Access to training and development opportunities is important to you, as is professional recognition. As such you may identify more strongly with your own professional body than with your organisation. Public recognition of your skills is important to you and you will value respect from your peers.

Service

What is important in the service anchor is the opportunity to pursue work that achieves something of value, such as making the world a better place to live, solving environmental problems, improving harmony among people, helping others, improving peoples safety and so on. You pursue such opportunities even if it means changing organisations, and you do not accept transfers or promotions that would take you out of work that fulfils your values.

You need to be able to influence the values of your organisation and to feel passionate about them. If the organisations values are not in line with your own you will struggle to remain motivated and committed at work. You will need to feel that your work is meaningful and be able to see a clear link between your work and the outcomes it has on society.

Autonomy

What is important in the autonomy anchor is the opportunity to define your work in your own way. If you are in an organisation, you will want to remain in jobs that allow you flexibility regarding when and how to work. If you cannot tolerate organisational rules and restrictions to any degree, you seek occupations in which you will have the freedom you seek such as teaching, research consulting, or self-employment. You are likely to refuse opportunity for advancement in order to retain autonomy.

You will like your work to be time bound and clearly delineated, so project work may appeal to you. You may prefer to work alone and not have to rely on others.

Challenge

What is important in the challenge anchor is the opportunity to work on solutions to seemingly impossible problems, to win out over tough opponents, or to overcome difficult obstacles. The most meaningful reason for pursuing a job or career is that it permits you to win over the impossible. Novelty, variety and difficulty become ends in themselves and if something is very easy it becomes immediately boring.

You will enjoy experiencing daily combat at work against tough opponents. You will be extremely self-reliant. You set high standards for yourself and may struggle to

understand and to work with colleagues who do not have the same standards. Others may easily frustrate you.

Creativity

What is important in the creativity anchor is the opportunity to be innovative and progress your own ideas. These ideas will be built on your own abilities and your willingness to take risks and to overcome obstacles. You want to prove to the world that you can create something that is the result of your own effort.

You are likely to have high energy levels when working on projects, and ownership of your work is very important to you. You will need to have variety and the opportunity for change in your work as when required to complete routine tasks you will be easily bored.

General Management

What is important in the general management anchor is the opportunity to climb to a level high enough in an organisation to enable you to integrate the efforts of others across functions and to be responsible for the output of a particular unit of the organisation. You want to be responsible and accountable for total results and you identify your own work with the success of the organisation for which you work.

You will enjoy motivating others to achieve organisational goals and will probably analyse information and solve problems quickly. You will need to achieve a high status and view success in terms of position and material gains. You will be able to make tough decisions without feeling guilty and will be stimulated by crisis.

Introduction to the project

I am working on a PhD study in conjunction with West Mercia Police - my research focuses on careers, specifically in relation to Police Staff.

Traditionally career success has been defined in terms of status and position – vertical advancement through an organisation has been the main component. This approach to careers has been criticised as it excludes the majority of employees from ever achieving career success!

More recently careers are being viewed in a much wider sense, for my research I will be using the following definitions for career and career success: -

Career: - “the sequence of employment related positions, roles, activities and experiences encountered by a person” (Arnold, 1997)

Career Success “The ultimate goal of the career is psychological success, the feeling of pride and personal accomplishment that comes from achieving one's most important goals in life be they achievement, family happiness, inner peace or something else there are infinite ways to achieve psychological success (Hall, 1996)

These definitions make the concept of careers broader and more realistic. Not everyone wants to be Chief Constable, not everyone will make a good manager, therefore using a more flexible approach to careers enables more people to achieve a feeling of success.

In addition to the above the project aims to be realistic – the ideal job is not always available. For this reason I will also be looking at job redesign; methods of adapting an individual current job to make it more congruent with their dominant career anchors.

Aims of the Project

- to provide managers with a framework to help them understand their employees and to produce structured career development plans.
- to increase the congruence of individuals jobs with their career anchors.
- if the above is successful, WMC should see an increase in job satisfaction and organisational commitment among the Police Staff involved in the study.

Aims of the Expert Panel

- Using their knowledge of the roles, organisation and ICF match Police Staff role profiles to career anchors. NB: 4 areas will be looked at for this project; Operations, CJSD, Crime & Divisional roles.

Timetable for Expert Panel

MEETING	AIMS
13.00 – 16.30 8 th March	- Introduction to aims of the panel - Operations role profiles
9.30 – 13.00 30 th March	- Divisional role profiles
9.30 – 12.30 8 th April	- CJSD role profiles
9.30 – 12.30 27 th April	- Crime role profiles

Career Anchors - Introduction

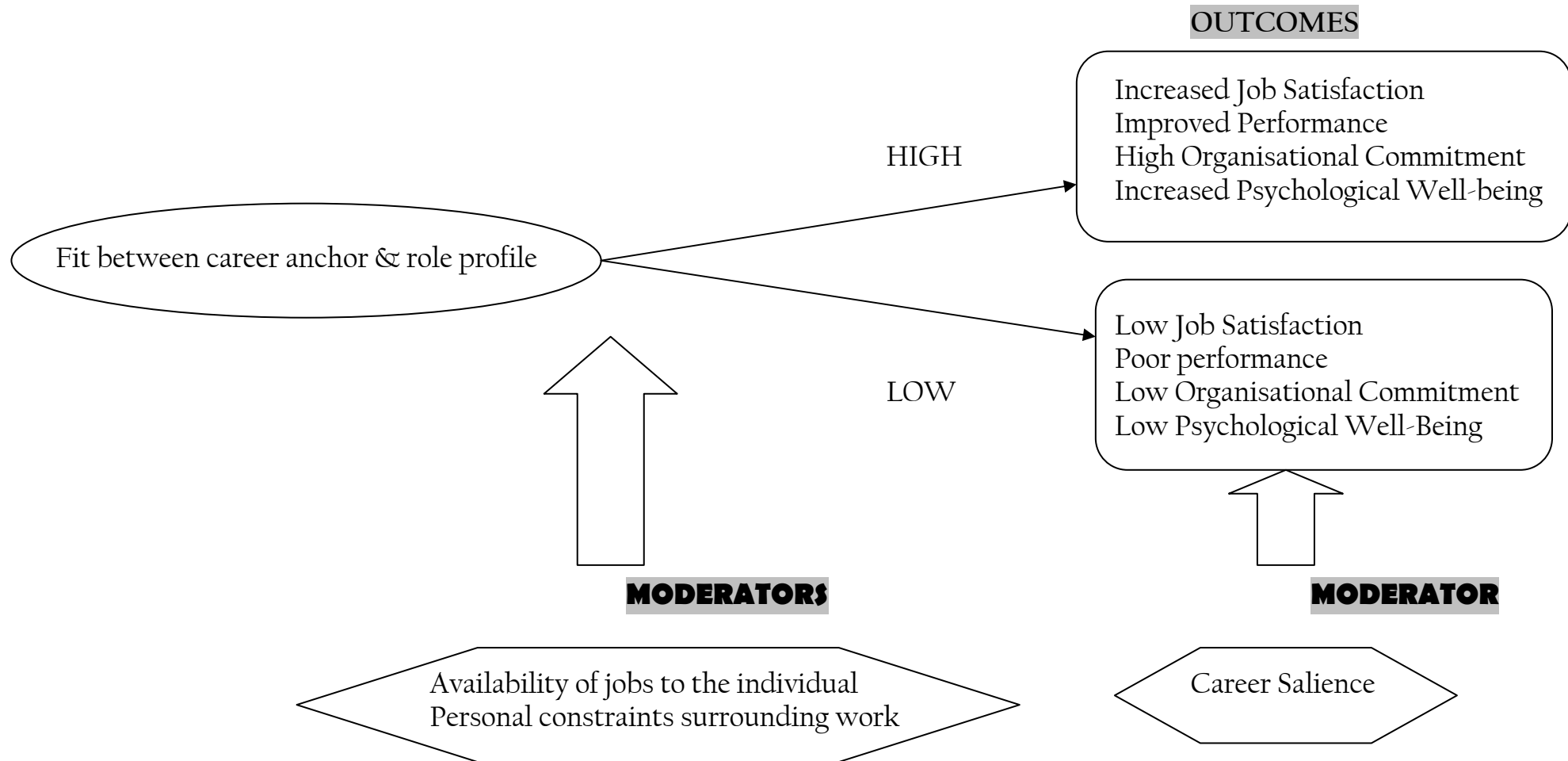
Definition: Career anchors are defined here as the elements of a person's values, needs and motivations that he or she will not give up. People typically manage to fulfill a broad range of needs in any given role, but those needs are not all equally important.

Implications: If an individual's job does not fit well with the career anchors that are important to them, this is likely to have a negative effect on performance. If this situation continues it has been shown that job satisfaction, and organisational commitment decreases.

The Anchors:

- 1) **General Management** – motivated by being able to analyse and solve problems, enjoys harnessing people together to achieve common goals.
- 2) **Functional Expertise** – the content of the work itself is important, motivated by the desire to become a specialist in his or her functional area.
- 3) **Autonomy & Independence** – prefers to set their own work schedule, free from organisational constraints.
- 4) **Security & Stability** – motivated by job security and long-term attachment to an organisation, may dislike travelling for work.
- 5) **Creativity** – the need to create or to build something is an important driver, needs variety in their work.
- 6) **Sense of Service** – likes to feel they are helping the world in some way, work activities should align closely with their personal values.
- 7) **Pure Challenge** – motivated by overcoming major obstacles and solving difficult problems, competition and being successful is important.
- 8) **Lifestyle** - needs to achieve a balance between work and lifestyle, flexibility will be important and organisations willing to understand personal circumstances.

The Career Anchor Model



GENERAL MANAGEMENT: (GM)

Motivators/Skills/Values

- Working through problems
- Motivating others
- High level of responsibility
- Working towards organisational goals
- Challenging work
- Varied work
- Interpersonal competence (able to lead others)
- Emotional competence (stimulated by crisis)
- Problem solving
- Ability to make tough decisions
- Material gains
- Achieving goals

How Success is Measured

- Level in hierarchy achieved
- Number of promotions received
- Amount of responsibility
- Status
- Salary

Links to other anchors

TF – management in specialist area

EC – will want to manage business and have all the ideas, innovative organisation

PC – will want the management role to focus on problem solving, possibly suitable for an organisation that is struggling

SV – management of an area that contributes to the greater good e.g. charity

AU – senior management role or head of own company - setting own rules

LI – junior management roles may be more appropriate

SE – management in stable organisation e.g. public sector, unlikely to move

FUNCTIONAL EXPERTISE: (TF)

Motivators/Skills/Values

- Developing specialist skills
- Challenging work in functional area
- Ability to use specialist skills at work
- Mentoring others – passing on skills
- Content of work is important – needs to be related to their interests
- Knowing they are an expert
- Function specific
- Dedication to area of expertise
- Professional membership
- Self image is tied up with feeling competent in field
- Access to resources
- Access to training & development activities

How Success is Measured

- Public acknowledgement of skills
- Increase in scope of job role
- Ability to pass on skills to others
- Specialist budgetary control

Links to other anchors

GM – Manage specialist teams

LI – May suit consultancy based roles, freelance positions

EC – Creativity in specialist area may be appropriate (e.g. art, design)

SE – Greater depth of skill should increase opportunities in specialist orgs

PC – Will need challenging projects in specialist area, possibly high-level research work

SV – Specialist skill may be relevant to good cause – e.g. counselling

AU – Links to consultancy or academic professions

AUTONOMY & INDEPENDENCE: (AU)

Motivators/Skills/Values

- Working independently
- Being able to set own working schedule
- Work that is time bound and clearly delineated
- Being free from constraints
- Self motivated
- Well organised
- Have a clear idea of what they want from work
- Good at time management
- Good work life balance
- Autonomy
- Flexible employment patterns

How Success is Measured

- Amount of freedom
- Increased flexibility from employer
- Good work life balance

Links to other anchors

TF – Will require autonomy to reach technical functional competence e.g. academics

GM – Management roles often have a level of autonomy particularly at a higher level

LI – The ability to balance lifestyle and work will be greater in autonomous roles

SE – The ability to be autonomous may require a certain level of security, e.g. financial stability

EC – The opportunity to be creative may be greater in autonomous roles

PC – Will require a challenge to be set then left alone to complete it

SV – Flexible voluntary work

SECURITY & STABILITY: (SE)

Motivators/Skills/Values

- Job security
- Geographical stability
- Predictable future
- Loyalty
- Predictability
- Reliable
- Adaptable – if security is in place
- Conformity
- Needs to have trust in their employer
- Loyalty
- Long service

How Success is Measured

- Security
- Stability
- Long term benefit plans such as pension
- Respect

Links to other anchors

GM – Will need to manage in a secure environment, may not like to take risky decisions

TF – May be suited to academia where employment tends to be secure and predictable

AU – Again an academic route would provide flexibility and security

EC – Public sector employment that allowed for creativity and innovation would be beneficial

SV – Work for a large organisation or charity where employment was secure and processes were unchanging

LI – A link to one geographical area may be connected to family/lifestyle commitments

PC – A challenging role within a secure organisation e.g. government policy making role

CREATIVITY: (EC)

Motivators/Skills/Values

- Creating new ways of working
- Working on new ideas
- Variety
- Building up new projects
- High levels of energy
- Good at generating ideas
- Motivated
- New ideas
- Open minded employers
- Change

How Success is Measured

- Number of new ideas generated
- Ability to question and change ways of working
- Ability to innovate

Links to other anchors

GM – Management roles normally enable a certain amount of creativity – would make good project managers

TF – Specialist/Innovator in a particular area that is constantly changing

LI – May integrate the need to be creative with a non work activity

SV – Would enjoy new projects related to their particular cause

SE – Would need a certain amount of baseline security as well as a variety in their work

AU – Would be suited to running their own business or short term consultancy projects

PC – Would need challenging new projects constantly to maintain their interest

SENSE OF SERVICE: (SV)

Motivators/Skills/Values

- Feeling that actions contribute to helping people in someway
- Meaningful work
- Being able to practise their values at work
- Ability to influence senior management
- Ability to influence organisational police
- Strong minded
- Dedicated
- Will depend on the individual
- Values need to match the employers
- Openness
- Helping society

How Success is Measured

- Feeling as though actions have helped society in some way
- Influencing organisations policies
- Level of fit between individual and organisations values

Links to other anchors

GM – Will need to manage in an organisation consistent with their values – will probably make an enthusiastic manager

TF – Will want to use skills in a particular way to improve situations

PC – Will be happy to work on complex long term issues related to their particular values

LI – The service anchor may form part of a wider lifestyle choice

EC – This combination is already creating a number of new ventures devoted to environmental issues

AU – Will be very motivated towards improving things will like to be free from organizational constraint

SE – Will need to be in a secure position linked to their values

PURE CHALLENGE: (PC)

Motivators/Skills/Values

- Working on difficult problems
- Competition
- Testing their abilities
- Winning
- Ability to work on complex difficult problems
- Single minded
- Competitive
- Determination
- Winning
- Variety

How Success is Measured

- Overcoming difficult problems
- Being given more difficult problems to work on
- Winning out against opponents

Links to other anchors

GM – Will need a difficult management role – possibly in a team that is having difficulties

TF – Will enjoy working through issues in their area of expertise

LI – Work will probably be an important art of their life, as will training and development

SE – Will need an element of security in their employment or location in order to focus fully on challenging work

SV – Will have a strong focus on whatever cause they are overcoming problems for

AU – Need freedom to work on assignments in their own time and in their own way to get to the solution

EC – Will enjoy overcoming difficulties when making their own new products

LIFESTYLE: (LS)

Motivators/Skills/Values

- Ability to balance work and lifestyle
- Flexibility
- An employer who understands and responds to their needs
- If work life needs are met will be very committed
- If needs are met will be adaptable when possible
- If needs are met will be loyal
- Work life balance
- Adaptable employers
- Flexible working patterns

How Success is Measured

- Ability to balance work with lifestyle needs
- Being in an organisation that understands their individual needs

Links to other anchors

GM – Would make understanding managers, as they would be likely to try and be flexible with their staff.

TF – Freelance or consultancy work in a specialist area may be an ideal role as they would be able to largely set their own timetable.

EC – Their creativity need may be exercised in hobbies or leisure pursuits

SV – The need to improve the world in some way is likely to be part of the individuals chosen lifestyle

SE – Would require security and routine in their employment possibly because of family commitments

AU – As above freelance or consultancy work may be ideal as they would be able to be flexible with their working hours

PC – While they will require work life balance challenge and variety will still be very important

Appendix 9 Job Anchor Questionnaire

- 1: This job requires me to provide my professional/expert opinion to others
- 2: This job requires me to integrate and manage the work of others
- 3: The job allows me the freedom to do it my own way.
- 4: This job gives stability and security
- 5: This job provides the opportunity to start new projects
- 6: The job I do makes a real contribution to the welfare of society
- 7: In this job I am required to solve problems and work in extremely challenging situations
- 8: This job enables me to pursue my personal and family concerns
- 9: This job gives the opportunity to develop technical and functional skills to a high level
- 10: In this job I make decisions that affect the people I am in charge of
- 11: This job enables me to define my own procedures, tasks and schedules
- 12: This job provides employment security in the organisation
- 13: This job provides the chance to be creative
- 14: This job provides the chance to apply my talents to the service of others
- 15: This job gives the opportunity to overcome difficult challenges
- 16: This job enables me to integrate my personal, family and work needs
- 17: This job enables me to use and develop my specialist skills
- 18: This job provides a career path to general management
- 19: This job provides a career path to a role which has complete autonomy and freedom
- 20: This job is based in one geographical area
- 21: In this job I am able to create things that are a direct result of my own efforts
- 22: The work in this job uses my skills to help make the world a better place
- 23: This job involves solving seemingly unsolvable questions
- 24: This job allows me to achieve work life balance

- 25: My job is in an area where you can become a specialist/expert
- 26: This job is related to general management
- 27: This job gives me freedom and autonomy
- 28: This job provides financial security
- 29: Creative activities are a central part of this job
- 30: This job makes me feel as if I am providing a service to others
- 31: This job involves competition and winning
- 32: This job enables me to balance my professional and personal lives
- 33: This job enables me to use my specialist skills and talents
- 34: This job provides a career path to senior management
- 35: This job enables me to work autonomously
- 36: This job makes me feel secure
- 37: This job involves starting new projects and generating ideas
- 38: This job makes me feel like I am providing a direct service to others
- 39: This job enables me to look for solutions to challenging problems
- 40: This job creates minimum interference between my work and home life.

Appendix 10 List of Publications

Steele, C. (2005) Reviving Career Anchors: A Normative Approach. *Proceedings of the Division of Occupational Psychology's 2007 Postgraduate Occupational Psychology Conference*, Nottingham.

Steele, C. (2005) Flexible Career Planning for Police Staff; A Career Anchor Approach. *Proceedings of the 20th Anniversary PsyPAG 2006 Postgraduate Psychology Conference* Exeter.

Steele, C. & Francis-Smythe, J. (2006) Flexible Career Planning for Police Staff; Combining Career Anchors and Competencies. *Proceedings of the British Psychological Society's 2007 Occupational Psychology Conference*, Glasgow.

Steele, C. (2006) Careers in the Naughtyies. *Proceedings of the PsyPAG 2006 Postgraduate Psychology Conference*, Reading.

Steele, C. & Francis-Smythe, J. (2007) Career Values in the Noughties; *Proceedings of the Division of Occupational Psychology's 2007 Postgraduate Occupational Psychology Conference*, Bristol.

Steele, C. & Francis-Smythe, J. (2007) Career Anchors and Empirical Analysis; *Proceedings of the British Psychological Society's 2007 Occupational Psychology Conference*, Bristol.

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